AUTHOR: Sokolov, B.L., Deputy-Delegate SOV-28-58-4-31/35

TITLE: Checking the Quality of Confectionary Products (Proverka kachestva konditerskikh izdeliy)

PERIODICAL: Standartizatsiya, 1958, Nr 4, pp 88 - 89 (USSR)

ABSTRACT: State control laboratories carried out inspections of confectionary enterprises to verify whether the "RTU" state standards, introduced in the RSFSR, have been observed. It was stated that in a great number of enterprises, RTU-standards were not complied with, resulting in a deficient quality of products. The article contains various examples of observed deficiencies. Measures to improve the quality of confectionary products were taken by the State laboratories together with local organizations.

ASSOCIATION: Komitet standartov, mer i izmeritel'nykh priborov pri Sovete Ministrov, RSFSR (Committee of Measurements, Standards and Measuring Instruments of the Council of Ministers, RSFSR)

1. Food--Production 2. Food--Quality control

Card 1/1

AUTHOR: Sokolov, B. L., Engineer

SOV/28-59-1-9/29

TITLE: The Inspection of the Maintenance of Standards and Technical Regulations (Kontrol'za soblyudeniyem standartov i tekhnicheskikh usloviy)

PERIODICAL: Standartizatsiya, 1959, Nr 1, p 33 - 36 (USSR)

ABSTRACT: The Inspection of enterprises, which produce bread and confectionery, fish products, cheese, staple fiber and viscose fabrics, jacqard blankets, furniture, enamelware, meat products and children's garments, was carried out by the laboratories. The defective quality of the above mentioned products, as well as the defective organization of the inspection itself, is commented on here. The inspection however, resulted in an improvement in production quality and modernization of a number of plants. The Krasnoyarsk sovnarkhoz decided to construct seven new cheese plants, and to reconstruct 9 dairy plants. The reconstruction of the Blagoveshchensk Confectionery plant was settled; it is planned to replace the old equipment by new machinery. New equipment was installed in the bread plants in Arkhangel'sk, Penza, Tambov. There is 1 Soviet reference.

Card 1/2

SOV/28-59-1-9/29

The Inspection of the Maintenance of Standards and Technical Regulations

ASSOCIATION: Upravleniye upolnomochennogo Komiteta standartov, mer i izmeritel'nykh priborov pri Sovete Ministrov RSFSR (The Administration of the Committee of Standards, Measures and Measuring Devices at the RSFSR Council of Ministers)

Card 2/2

SOV/115-59-2-3/38

9(6)
AUTHOR: Sokolov, B.L.

TITLE: Preparations for the Change-Over to New Forms of State Supervision of Measuring Techniques (Podgotovit'sya k perekhodu na novyye formy gosudarstvennogo nadzora za izmeritel'noy tekhnikoy)

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 2, pp 7-9 (USSR)

ABSTRACT: In connection with the decision of the Committee for Standards, Measurements and Measuring Instruments to postpone implementation of regulations 12-58, the main task of the Committee and its local organs during 1959 is to take the necessary preliminary steps for the change-over to new forms of national supervision. The author feels - on the subject of improving the material-technical bases - that although considerable improvements occurred during the Three Year Plan 1955-1958, especially by supplying new equipment to laboratories, a great deal remains to be accomplished. The plan has

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not been fully implemented, and this endangers successful realization of the projected new State supervision. The currently operative system of stationary control should be replaced by completely equipped, portable laboratories. At present, there are only experimental units in operation. The period 1959-1962, fixed by the Committee, for producing such laboratories is too long and impractical. Moreover, work on design development has not yet begun. Instructions on measuring errors must also be revised. Inspectors doing this job must be allowed much more initiative and, in any case, be able to request replacements for measuring instruments. Inspectorates must establish a supply of spare instruments which may be loaned out to enterprises, in order to avoid production difficulties during the period of control. The situation in repair shops must be improved by expanding the nomenclature system. The hitherto operative system, where repair facilities are not readily available and the inferior quality of equipment is

Preparations for the Change-Over to New Forms of State Supervision of Measuring Techniques

consequently tolerated, must be removed. Repair service stations should be made more specialized. Nevertheless, the quality of personnel in metrological laboratories has improved during the last three years, although regular courses of instruction lasting 1-2 months should be organized. In addition, the curriculae in technical schools and courses for training state inspectors should be revised, as well as the administrative-technical aspects of organizing inspection. These revisions are of considerable importance for the eastern regions of the USSR, where there is an acute shortage of institutes, which have to serve too many laboratories. For example, the Novosibirsk State Institute has to serve all the laboratories in the Uzbek, Kazakh, Tadzhik and Turkmen SSR and in Siberia and the Far East. Also, the accounting aspects of the inspectorates' work needs revising and a reorganized bonus system would be very helpful. Finally, the editorial staff points to the very import-

Preparations for the Change-Over to New Forms of State Supervision of Measuring Techniques

ant issues, raised by the author and requests opinions on them from readers of the journal.

Card 4/4

25 (5) SOV/115-59-10-1/29

AUHTOR: Sokolov, B.L.

TITLE: Systematic Increase of Labor Productivity - an Urgent Task of Local Branches of the Committee

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 10, pp 1-3 (USSR)

ABSTRACT: Different measures are proposed by the author for increasing the labor productivity of local branches of the Committee of Standards, Measures and Measuring Equipment. The work of such a branch, the GKI = Gosudarstvennaya kontrol'naya laboratoriya (State Control Laboratory) is analized, criticized and some changes proposed. The author lists certain important flaws in the present system of the work organization in these laboratories, such as the internal division of the laboratory staff into groups for each kind of measuring control; the existence of a special inspection group in each laboratory which assumes the control of various industrial enterprises and plants and very often re-checks the production already inspected by a state

Card 1/2

. Systematic Increase of Labor Productivity - an Urgent Task of Local Branches of the Committee

controller, (each year only in the RSFSR 75,000 working days are consumed on more than 2,000 inspections); excessive paper work, etc. As an example of good work organization, the author mentions the Gor'kiy GKL, where all such flaws in the organization were abolished, resulting in an 21% increase of labor productivity of each laboratory worker in a 3-month period. The author also recommends continuous training of the laboratory staff. The author quotes cases where rationalizing propositions were delayed for a long time, as was the case with a proposition by the technical inspector of the Chernigov GKL, I.S. Krever, who suggested that the chekking of commercial scales be simplified and speeded up. Very often such improvements are introduced in individual laboratories. Therefore, an exchange of technical information between laboratories must be organized and standards for the productivity degree of individual laboratory workers drafted.

S/115/60/000/011/013/013
B019/B058

AUTHOR: Sokolov, B. L.

TITLE: Republic Conference on Quality Control of Finished Instruments

PERIODICAL: Izmeritel'naya tekhnika, 1960, No. 11, pp. 59 - 62

TEXT: This Conference was held by resolution of the July Plenum of the TsK KPSS and the Upravleniye upolnomochenogo Komiteta pri Sovete Ministrov RSFSR (Administration of the Authorized Committees at the Council of Ministers of the RSFSR). The following collaborators of the GKL held lectures: S. A. Zabutov (Krasnodarsk), P. M. Larionov (Chelyabinsk), Kh. D. Valeyev (Tatar GKL), B. Yu. Rozin (Omsk), D. I. Shmatok (Tomsk), and B. L. Sokolov, Senior Engineer of the Administration. In their lectures which are dealt with in detail, they described the state of instrument construction within the scope of the GKL and the control-testing stations in instrument-construction plants. They made suggestions regarding measures to improve control work, and also dealt with the collaboration between GKLs and sovnarkhozes, as well

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as various plant commissions. Arutyunyan (Tambovskaya GKL) pointed out deficiencies of the effectiveness of control stations in the plants. Staroverov (Kurskaya GKL) was of the opinion that the dial heads made by the Kokchetavskiy zavod (Kokchetav Plant) are imperfect. Solov'yev (Ivanovskiy GKL) proved that intermediate controls during the production of instruments must be extended to improve the quality. Furmavin (Tatarskaya GKL), Head of the testing department of the "Teplokontrol'" Plant, criticized the fact that the instruments are delivered to the testing stations very irregularly, especially at the end of the month. This fact greatly influences the exactness of tests. Krayev (Kirovskaya GKL) suggested to hold conferences for the purpose of investigating the quality of instruments. He also demanded the introduction of information cards for each instrument. Malinin (Gor'kovskaya GKL) suggested to specialize instrument-construction plants. Klochkov (Kaluzhskaya GKL) criticized the fact that the Gosplan is planning the delivery of instruments, of which the plants have not even a notion. Zaks also dealt with the problem of regular checkups of finished instruments. Further

mentioned are: Ivanov (Bashkirskaya GKL), Yefremov (Saratovskaya GKL), Samodurov (Ryazanskaya GKL), Puzenko (Kemerovskaya GKL), Toropov (Vologodskaya GKL), Karlov (Orlovskaya GKL), and Gol'dshteyn (VNIIK).

SOKOLOV, B.L.

Improve the quality of manufactured instruments. Izm. tekh. no.3:1-3 Mr '61. (MIRA 14:2)
(Instrument manufacture)

SOKOLOV, B.I.

Important objectives of State Laboratories for Testing Measuring Equipment. Izm.tekh. no.12:1-3 D '61. (MIRA 15:1)
(Testing Laboratories)

SOKOLOV, B.L.

Activity of the Main Testing Laboratory in controlling production quality of the instrument industry. Izm.tekh. no.12:1-4 D '62. (MIRA 15:12)
(Testing laboratories) (Instrument industry)

SOKOLOV, B.L.

Material responsibility for the violation of standards.
Standartizatsiia 27 no.9:47 S '63. (MIRA 16:10)

SOKOLOV, B.L.

Role of the state testing laboratories in the introduction of a defect-less manufacture of instruments. Izm.tekh. no.6:56-58 Je '64.
(MIRA 17:12)

SOKOLOV, B.L.

Practice of the Kirov State Testing Laboratory in carrying out official inspection of measuring instruments in consolidated districts. Izm.tekh. no.8:56-58 Ag '64. (MIRA 17:12)

BODUNGEN, I.N., inzh.; VINOGRADOV, K.V., inzh.; VELLERSHTEYN, A.L., inzh.; GOL'DGOF, B.G., inzh.; KUZ'MIN, V.S., inzh.; KULIKOV, P.S., inzh.; LEBEDEV, N.N., inzh.; LEVI, S.S., kand.tekhn.nauk; ROZANOV, M.S., inzh.; SIDOROV, V.N., inzh.; SOKOLOV, D.V., inzh.; SLONIM, N.M., inzh., laureat Stalinskoy premii; EPSHTEYN, A.L., inzh.; ANTRUSHIN, B.D., inzh., nauchnyy red.; SIMAKOV, S.N., inzh., nauchnyy red.; TRUBIN, V.A., glavnyy red.; SOSHIN, A.V., zam.glavnogo red.; GRINEVICH, G.P., red.; YEPIFANOV, S.P., red.; ONUFRIYEV, I.A., red.; ZIMIN, P.A., red.; VDOVENKO, Z.I., red.izd-va; SHIROKOVA, G.M., red.izd-va; EL'KINA, E.M., tekhn.red.

[Power engineering handbook for construction work] Spravochnik energetika na stroitel'stve. Izd.2., perer. i dop. Pod red. N.N. Lebedeva. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1960. 736 p. (MIRA 13:11)
(Power engineering)

SOKOLOV, D.V.

Use of APN electric wires. Energetik 8 no.9:39 S '60. (MIRA 14:9)

(Electric lines)

ALEKSEYEV, Aleksandr Grigor'yevich; GANYAYEV, Boris Dmitriyevich; MARKELOV, Vasiliy Vasil'yevich; SOKOLOV, D.V., inzh., nauchnyy red.; GORDEYEV, P.A., red. izd-va; ABRAMOVA, V.M., tekhn. red.

[Industrial installation of large preassembled electric equipment at industrial enterprises] Industrial'nyi montazh elektrooborudovaniia promyshlennykh predpriiatii. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 123 p. (MIRA 14:6)
(Electric apparatus and appliances)

ZYUZIN, A.F.; IL'IN, Ye.V.; LAZAREV, N.I.; SOKOLOV, D.V., inzh., nauchnyy red.; SHIROKOVA, G.M., red. izd-va; BOROVNEV, N.K., tekhn. red.

[Installing electrical equipment in industrial enterprises and installations] Montazh elektrooborudovaniia promyshlennykh predpriiatii i ustanovok. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 283 p. (MIRA 15:2)
(Electric power distribution--Equipment and supplies)

SOKOLOV, D.V., inzh.; FRENKEL', S.N., inzh., nauchnyy red.; ARSEN'YEVA, Z.N., red. izd-va; GOL'BERG, T.M., tekhn. red.

[Establishment of secondary commutation in electric systems] Montazh vtorichnoi kommutatsii v silovikh elektroustanovkakh. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 302 p. (MIRA 14:7)

1. Russia(1917- R.S.F.S.R.) Glavnoye upravleniye po proizvodstvu elektromontazhnykh rabot.
(Automatic control) (Electric driving)

ALEKSEYEV, A.G.; BAYUSHKIN, S.N.; MARKELOV, V.V.; NEBESNYY, A.D.; SOKOLOV, D.V., inzh., red.; VOLNYANSKIY, A.K., glav. red.; TARAN, V.D., red.; SEREBRENNIKOV, S.S., red.; MIKHAYLOV, K.A., red.; STAROVEROV, I.G., red.; VOLODIN, V.Ye., red.; NIKOLAYEVSKIY, Ye.Ya., red.; CHEKHOVSKAYA, T.P., red. izd-va; BOROVNEV, N.K., tekhn. red.

[Concise manual on electric wiring operations] Kratkii spravochnik proizvoditelia elektromontazhnykh rabot. Pod red. D.V.Sokolova. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 311 p. (MIRA 14:10)

1. Moscow. Gosudarstvennyy proyektnyy institut Tyazhpromelektroproyekt.
(Electric wiring—Handbooks, manuals, etc.)

DELIBASH, B.A.; ZHIVOV, M.S.; TRUNKOVSKIY, L.Ye.; SOKOLOV, D.V., inzh., nauchnyy red.; VDOVENKO, Z.I., red. izd-va; SHERSTNEVA, N.V., tekhn. red.

[Modern methods for conducting electrical equipment installation operations]Progressivnye metody proizvodstva elektromontazhnykh rabot. Moskva, Gosstroiizdat, 1962. 134 p. (MIRA 15:12)

(Electric wiring) (Electric lines)

ANISIMOV, Aleksey Petrovich, inzh.; SOKOLOV, D.V., inzh., nauchnyy red.; GORDEYEV, P.A., red. izd-va; NAUMOVA, G.D., tekhn. red.

[Electric equipment and power supply at building sites] Elektrooborudovanie i elektrosnabzhenie stroitel'nykh ploshchadok. Moskva, Gosstroiizdat, 1962. 226 p. (MIRA 15:9)

(Building--Electric equipment)

KAPLAN, Ya.I.; OBUKHOV, A.I.; PILEVSKIY, M.V.; SHNITMAN, I.L.; VYSHESLAVTSEV, S.I., nauchnyy red.; VOLNYANSKIY, A.K., glav. red.; SOKOLOV, D.V., zam. glav. red.; TARAN, V.D., red.; SEREBRYANNIKOV, I.G., red.; MIKHAYLOV, K.A., red.; STAROVEROV, I.G., red.; VOLODIN, V.Ye., red.; NIKOLAYEVSKIY, Ye.Ya., red.; SHIROKOVA, G.M., red. izd-va; GOL'BERG, T.M., tekhn. red.

[Assembly of elevators] Montazh liftov. Moskva, Gosstroizdat, 1962. 227 p. (MIRA 15:7)

(Elevators)

LEYPUNSKAYA, D. I., SOKOLOV, D. V., OTIN[illegible], V. P. and TIKH[illegible]VA, N. I.

"Application of multi-channel gamma-ray spectometry in activation well logging."

report to be submitted for the Conference on Nuclear Geophysics, Krakow, Poland, 24-30 Sept 1962.

VAYNTRAUB, I.M., inzh.; GOBZA, R.N., inzh.; KATSNEL'SON, G.A., inzh.; KRASILOV, G.I., inzh.; ORENTLIKHER, P.B., inzh.; ERLIKHMAN, S.Ya., inzh.; VOLNYANSKIY, A.K., glav. red.; SOKOLOV, D.V., zam. glav.red.; TARAN, V.D., red.; SEREBRENNIKOV, S.N., red.; MIKHAYLOV, K.A., red.; STAROVEROV, I.G., red.; VOLODIN, V.Ye., red.; NIKOLAYEVSKIY, Ye.Ya., red.; SMIRNOV, L.I., inzh., nauchnyy red.; SKVORTSOVA, I.P., red. izd-va; SHERSTNEVA, N.V., tekhn. red.

[Adjusting, control, and operation of industrial ventilation systems]Naladka, regulirovka i ekspluatatsiia sistem promyshlennoi ventiliatsii. Pod red. S.IA.Erlikhmana. Moskva, Gosstroiizdat, 1962. 555 p. (MIRA 15:9)

1. Russia (1917- R.S.F.S.R.)Glavnoye upravleniye sanitarno-tekhnicheskogo montazha.
(Factories--Heating and ventilation)

GLUSHKOV, Georgiy Nikolayevich, inzh.; DENISOV, Valeriy Anatol'yevich inzh.; KRAYTSBERG, Meyer Itskovich, inzh.; SOKOLOV, D.V., inzh., nauchn. red.; RYAZANTSEVA, L.I., red.

[Electrical equipment and power supply in construction] Elektrooborudovanie i elektrosnabzhenie stroitel'stva. Moskva, Stroiizdat, 1964. 310 p. (MIRA 17:7)

GOL'DGOF, Boris Grigor'yevich, inzh.; SOKOLOV, Dmitriy Vladimirovich, inzh.; SOKOLOV, Boris Alekseyevich, inzh.; LEBEDEV, N.N., inzh., nauchn. red.; KORENEVSKIY, A.N., inzh., nauchn. red.

[Electrical equipment of industrial enterprises and systems in three parts] Elektrooborudovanie promyshlennykh predpriiatii i ustanovok v 3 chastiakh. Moskva, Stroiizdat, Pt.1. 1965. 322 p. (MIRA 18:9)

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ACCESSION NR: AP5020135 UR/0109/65/010/008/1542/1544
621.385.632.2

44,55 44,55 49 B

AUTHOR: Sokolov, D. V. ; Trubetskov, D. I.

TITLE: Effect of nonrectilinearity of static trajectories upon the operation of electron-beam magnetron-type devices 25

21 49,55

SOURCE: Radiotekhnika i elektronika, v. 10, no. 8, 1965, 1542-1544

TOPIC TAGS: magnetron

ABSTRACT: The effect of nonrectilinearity of static trajectories is calculated, within the framework of a linear nonadiabatic theory, using as a model an infinitely thin beam with a definite surface charge density. The method of successive approximations is used. The space charge and the attenuation distributed in the system are neglected. A set of two equations for r-f displacements and an equation of excitation of the transmission line by a nonrectilinear electron beam describe the phenomena in the model. It is found that, under ordinary synchronous conditions in the magnetron-type TW tube, the effect of nonrectilinearity of the static trajectories upon the interaction processes is negligible. Orig. art. has: 3 figures and 8 formulas.

Card 1/2

ACC NR: AR7000948 SOURCE CODE: UR/0275/66/000/011/A019/A019

AUTHOR: Sokolov, D. V.; Trubetskov, D. I.

TITLE: Approximate linear theory of a magnetron-type traveling wave amplifier

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 11A130

REF SOURCE: Sb. Vopr. elektron. sverkhvysok. chastot. Vyp. 2. Saratov. Saratovsk, un-t, 1966, 35-75

TOPIC TAGS: traveling wave amplifier, traveling wave tube, magnetron, dispersion equation, linear theory, space charge, successive approximation, Laplace transform

ABSTRACT: An attempt has been made to create a linear theory of the magnetron-type traveling-wave tube based on the method of successive approximations. In a number of cases, a dispersion equation method is used. An account is given of: 1) a simplified theory of the traveling-wave magnetron tube; 2) elements of non-diabatic theory of the traveling-wave magnetron tube, taking the effect of space charge into consideration; and 3) the effect of nonrectilinearity of static trajectories on the amplification factor of the magnetron-type traveling-wave tube. A solution of

Card 1/2 UDC: 621.385.632

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the problem is presented by the method of successive approximations based on the Laplace transform. A bibliography of 25 titles is included. [Translation of abstract]

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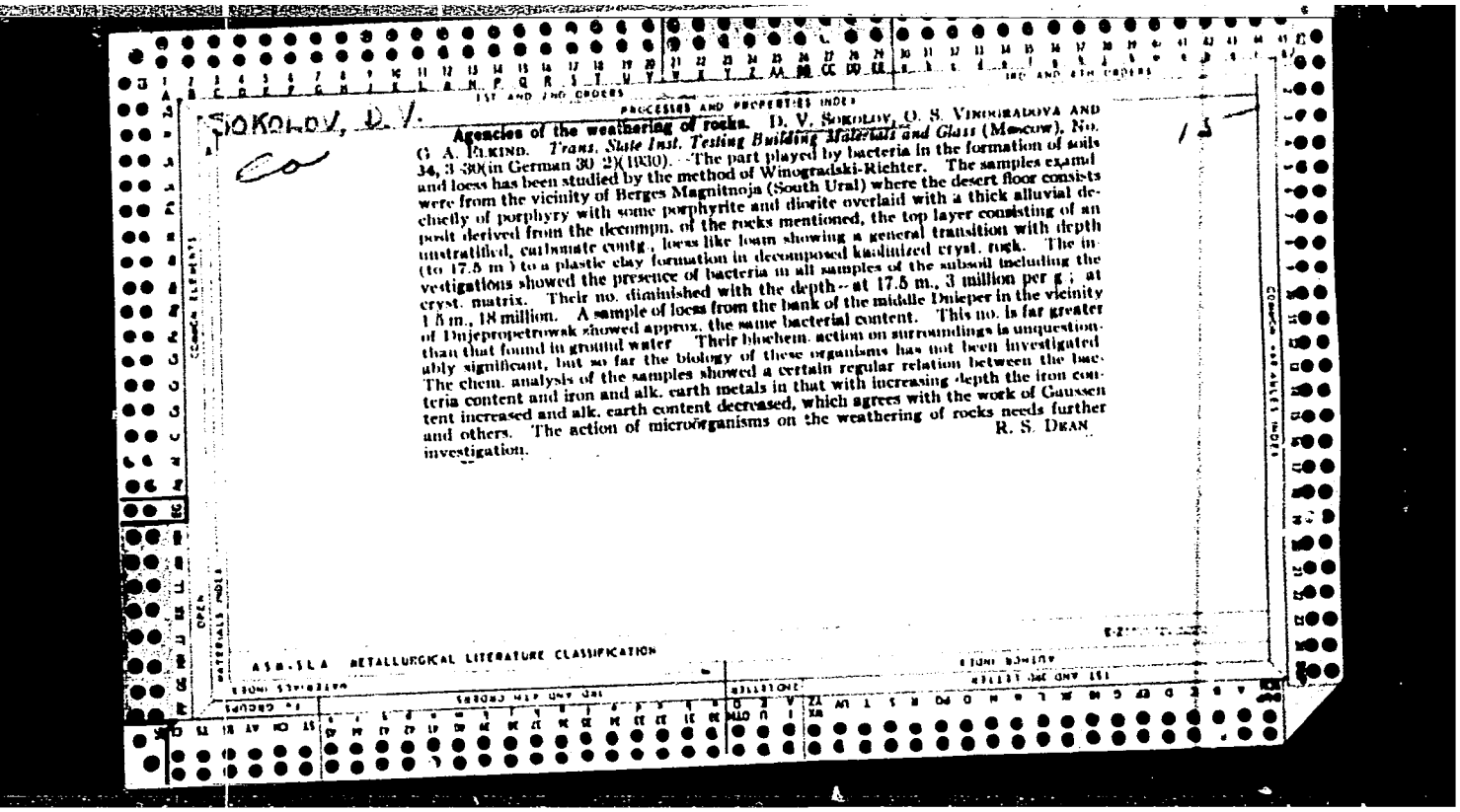
Card 2/2



SOKOLOV, D. V.

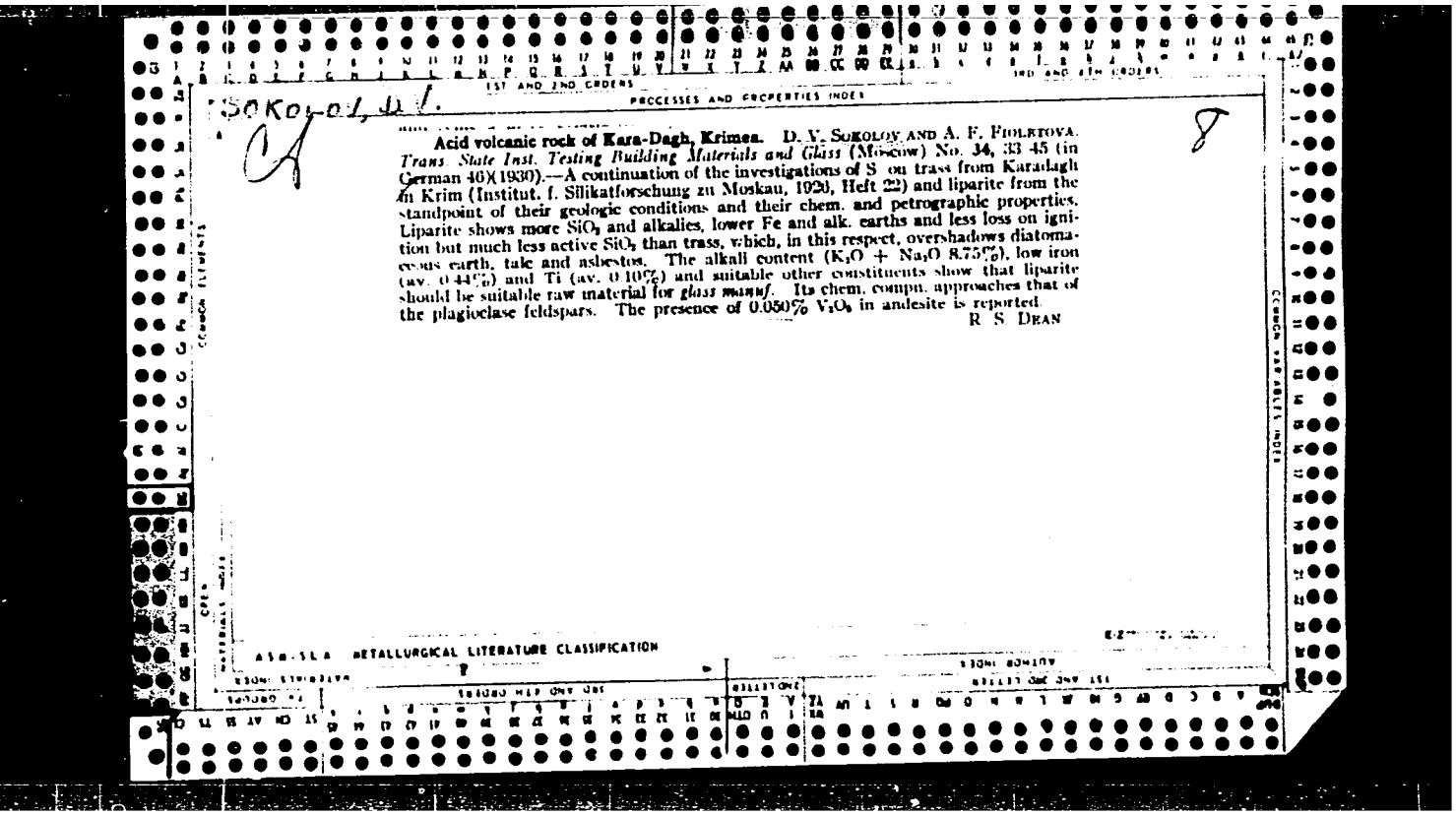
Co

PROCESSES AND PROPERTIES INDEX

Agencies of the weathering of rocks. D. V. Sokoloff, O. S. Vinogradova and G. A. Elkind. *Trans. State Inst. Testing Building Materials and Glass* (Moscow), No. 34, 3-30(in German 30-2)(1930). The part played by bacteria in the formation of soils and loess has been studied by the method of Winogradski-Richter. The samples examd were from the vicinity of Berges Magnitnoja (South Ural) where the desert floor consists chiefly of porphyry with some porphyrite and diorite overlaid with a thick alluvial deposit derived from the decompn. of the rocks mentioned, the top layer consisting of an unstratified, carbonate contg., loess like loam showing a general transition with depth (to 17.5 m.) to a plastic clay formation in decomposed kaolinized cryst. rock. The investigations showed the presence of bacteria in all samples of the subsoil including the cryst. matrix. Their no. diminished with the depth—at 17.5 m., 3 million per g.; at 1.5 m., 18 million. A sample of loess from the bank of the middle Dnieper in the vicinity of Dnjepropetrowsk showed approx. the same bacterial content. This no. is far greater than that found in ground water. Their biochem. action on surroundings is unquestionably significant, but so far the biology of these organisms has not been investigated. The chem. analysis of the samples showed a certain regular relation between the bacteria content and iron and alk. earth metals in that with increasing depth the iron content increased and alk. earth content decreased, which agrees with the work of Gaussen and others. The action of microorganisms on the weathering of rocks needs further investigation.

R. S. Dean

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



SOKOLOV, D. V.

CA

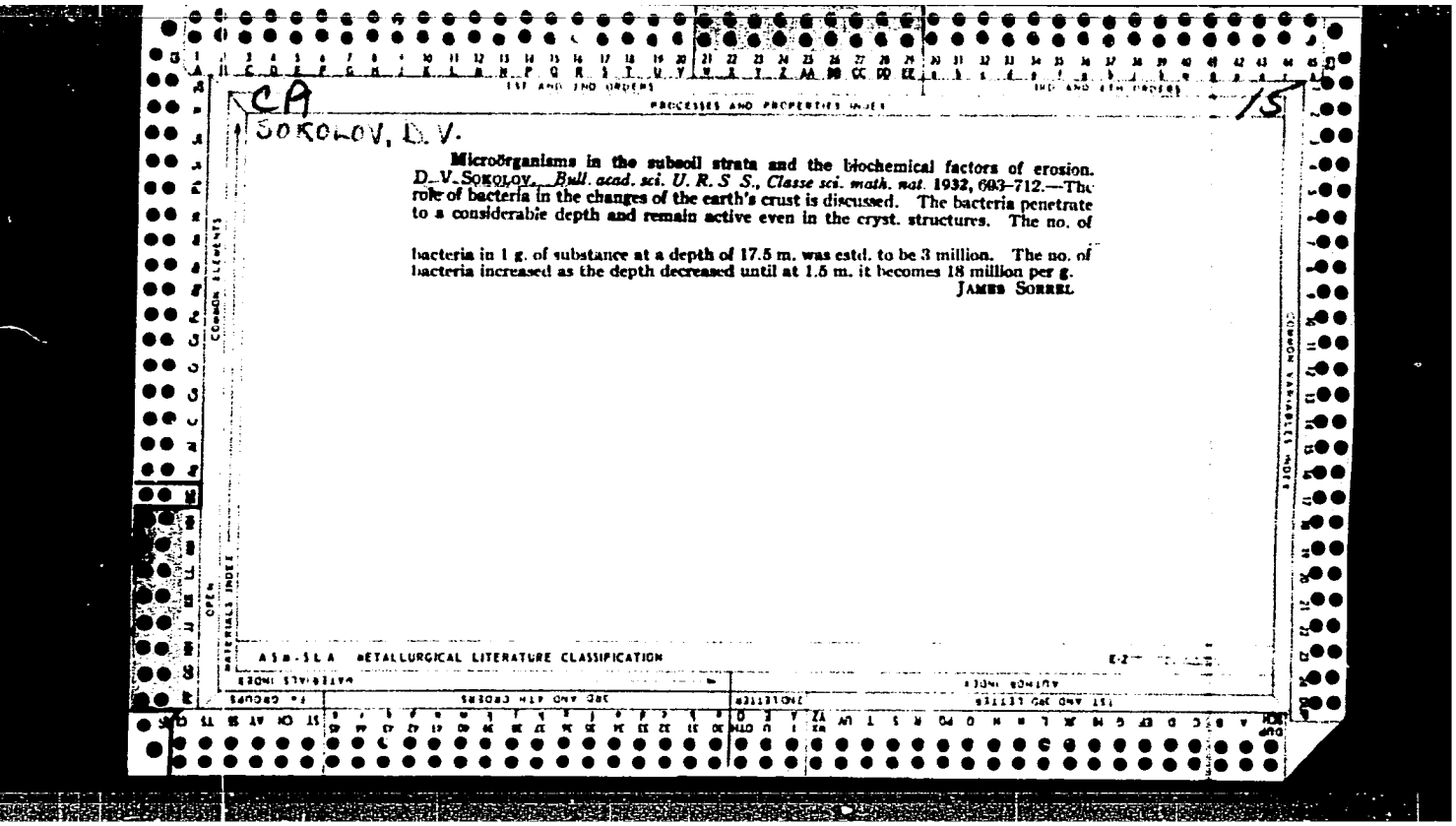
8

PROCESSES AND PROPERTIES INDEX

Acid volcanic rock of Kara-Dagh, Krimea. D. V. SOKOLOV AND A. F. FIOLETOVA. *Trans. State Inst. Testing Building Materials and Glass* (Moscow) No. 34, 33-45 (in German 46)(1930).—A continuation of the investigations of S on trass from Karadagh in Krim (Institut. f. Silikatforschung zu Moskau, 1929, Heft 22) and liparite from the standpoint of their geologic conditions and their chem. and petrographic properties. Liparite shows more SiO_2 and alkalies, lower Fe and alk. earths and less loss on ignition but much less active SiO_2 than trass, which, in this respect, overshadows diatomaceous earth, talc and asbestos. The alkali content (K_2O + Na_2O 8.75%), low iron (av. 0.44%) and Ti (av. 0.10%) and suitable other constituents show that liparite should be suitable raw material for *glass manuf.* Its chem. compn. approaches that of the plagioclase feldspars. The presence of 0.050% V_2O_5 in andesite is reported.

R. S. DEAN

A5a-5L4 METALLURGICAL LITERATURE CLASSIFICATION



CA

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SOKOLOV, D. V.

Microörganisms in the subsoil strata and the biochemical factors of erosion. D. V. Sokolov. *Bull. acad. sci. U. R. S. S., Classe sci. math. nat.* 1932, 693–712.—The role of bacteria in the changes of the earth's crust is discussed. The bacteria penetrate to a considerable depth and remain active even in the cryst. structures. The no. of bacteria in 1 g. of substance at a depth of 17.5 m. was estd. to be 3 million. The no. of bacteria increased as the depth decreased until at 1.5 m. it becomes 18 million per g.

JAMES SORREL

A 1 8 - 5 L A METALLURGICAL LITERATURE CLASSIFICATION E-2

SOKOLOV, D.V.

Sokolov, D.V. "The Caradoc stage in the Crimea," Geologicheskoye opisaniye Materialy Azovo-Chernomor. geol. upr. po geologii i poleznym iskopayemym, symposium 23, 1948, p. 3-68 - Bibliog: 55 items

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

KAMENSKII, G. N., SILIN-BEKCHURIN, A. I., SOKOLOV, D. V.

Water, Underground

Problems in the formation of ground waters bases on materials from the transactions of the Laboratory of Hydrogeological Problems, Vol. 1. Trudy Lab. gidrogeol.probl. No. 2, 1949.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

1. [illegible], D. V.

2. USSR (600)

4. Geologists

7. Konstantin Venyaminovich Petrov /obituary/. Trudy Lab. gidrogeol. probl. 6. 1949.

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.

SOKOLOV, D.V.

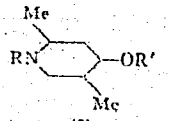
USSR 4

Heterocyclic compounds. XXIX. Stereoisomerism of 2,5-dimethyl-4-piperidinol, 1,2,5-trimethyl-4-piperidinol, and their derivatives. I. N. Nazarov, D. V. Sokolov, and V. N. Rakcheeva. *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1954, 80–04; cf. *C.A.* 44, 3460*e*; 48, 9371*i*.—To 12.7 g. 2,5-dimethyl-4-piperidinone in 350 ml. abs. EtOH was added 35 g. Na, and the mixt. heated to complete the reaction, dild. with H_2O, acidified with HCl, filtered, concd., treated with NaOH, and extd. with Et_2O, yielding a distillate of *isomeric* I (R = R′ = H) (II), b_4 101–2°; the cryst. portion (7.3 g.) was the *α-form* (IIα), m. 97–8° (from ligroine) (*picrate*, m. 173–4°; *HCl salt*, m. 222–3°); the mother liquor yielded an uncrystallizable isomeric mixt. which was benzoylated yielding 1 g. *γ-form* (IIIγ), m. 160°, of *1-benzoyl-2,5-dimethyl-4-piperidinol* (I, R = Bz, R′ = H) (III). Reduction in EtOH over Raney Ni in the presence of a little 20% NaOH gives the *β-form* (IIβ) of II, m. 141–2° (from petr. ether) (*picrate*, m. 179–80°; *HCl salt*, m. 209–10°); the mother liquor on benzoylation yielded 50%

(over)

1/8

IIIγ. Electrolytic reduction of 20 g. of the piperidone on a Pb cathode in 10% $(NH_4)_2SO_4$ at 20° and c.d. 0.020 amp./sq. cm. gave in 5 hrs. 2.2 g. IIδ. Treatment of 2,5-dimethyl-4-piperidone with BzCl in dil. NaOH gave the *1-Bz deriv.*, b_5 192–3°, m. 64–5° (from petr. ether) (2,4-



(I)

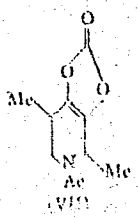
dinitrophenylhydrazone, m. 211–12°). This (21.4 g.) hydrogenated over Raney Ni in EtOH in the presence of a little 20% NaOH yielded (from 4 combined runs) 120 g. *isomeric* III; crystn. from C_6H_6 gave 47 g. pure IIIγ, m. 159–60° (*phenylurethan*, m. 178–9°), while the mother liquor on addn. of petr. ether gave 30 g. mixed IIIα and IIIβ forms, m. 88–95°. Heating IIIγ (10 g.) 35 hrs. on a steam bath with 100 ml. 18% HCl gave 4 g. *γ-form* (IIγ) of II, b_5 82–4°, i. 86–7° (from petr. ether) (*picrate*, oil; *HCl salt*, m. 187–8°). Similar hydrolysis of IIIα and IIIβ gave IIα and IIβ, m. 98° and 142°, resp.; IIβ ppts. directly from Et_2O, while IIα is sepd. as the HCl salt. Thus, electrolytic reduction yields IIα, IIβ, and IIγ. Heating 37.2 g. 2,5-dimethyl-4-piperidinone with 36 g. Ac_2O 30 min. on a steam bath gave, after evapn. *in vacuo* and washing with NaOH, 43 g. *1-acetyl-2,5-dimethyl-4-piperidinone*, b_1 122–4°, n_D^{25} 1.4913, d_{25} 1.0792, m. 56–7° (from petr. ether); the same substance (b_2 117–18°, n_D^{25} 1.4925, d_{25} 1.0816) formed on treatment of the ketone in dioxane with $CH_2{:}CO$

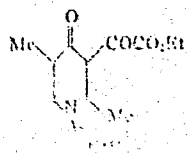
2 hrs.; *2,4-dinitrophenylhydrazone*, m. 177–9° (from EtOH). Hydrogenation of the Ac deriv. over Raney Ni in EtOH in the presence of a little 20% NaOH gave *mixed isomers*, b_5 135–8°, of I (R = Ac, R′ = H) (IV) from which was isolated about 30% *γ-form* (IVγ), m. 86–7° (*phenylurethan*, m. 232–3°). This refluxed with 18% HCl 30 hrs. gave the above described IIγ, m. 86–7°. Refluxing 4 g. IIβ with 7 g. Na in 50 ml. iso-AmOH 43 hrs. at 130–90° gave after the usual treatment 1.2 g. IIα, m. 96–8°. Similarly IIβ gave a low yield of IIα. IIα with BzCl in aq. NaOH gave IIIα, m. 136–7°. Similarly, IIβ gave the *corresponding* IIIβ, m. 134–5°. Heating 5 g. IIα.HCl with 8 g. BzCl 1 hr. at 140–50° gave after soln. in H_2O and extn. with Et_2O, 2.2 g. IIIα, b_4 164–5°, n_D^{25} 1.5240, d_{20} 1.0623 (*picrate*, m. 101–5°; *HCl salt*, m. 265–6°). Similarly IIβ.HCl gave the *corresponding* IIIβ, b_7 166°, n_D^{25} 1.5250, d_{20} 1.0800 (*picrate*, m. 235–6°; *HCl salt*, m. 267–8.5°). Heating IIIγ (m. 150–60°) (10 g.) with 10 g. BzCl to 170° until HCl evolution stopped, followed by passage of dry HCl at the same temp. 2 hrs. gave a ppt. of the HCl salt, which was sepd. and treated with aq. Na_2CO_3, yielding 5.5 g. *benzoate* (I, R = R′ = Bz) (V) of IIIγ, b_5 125–6°, n_D^{25} 1.5265, d_{20} 1.0633 (*picrate*, m. 173–4.5°; *HCl salt*, m. 253–4°). Treatment of the benzoate of IIα with BzCl in 10% NaOH gave Vα, m. 92–3° (from petr. ether). Similarly was obtained Vβ, m. 92–3°. Refluxing 3 g. IIIγ with 5 g. BzCl in C_6H_6 24 hrs. gave 2.5 g. Vγ, m. 117–18°. Heating 2 g. IIIα, m. 136–7°, with 4 g. Ac_2O and 1 drop H_2SO_4 7.5 hrs. at 60° gave 2.5 g. α-form (VIα) of I (R = Bz, R′ = Ac) (VI), b_2 187–9°, n_D^{25} 1.5290. Similarly IIIβ gave VIβ, m. 125–6°, while IIIγ gave VIγ, m. 92.5–3°. Heating 3.8 g. 32% formalin with 2.2 g. 90% HCO_2H and 5 g. IIα on a steam

bath 6.3 hrs. gave 4.7 g. *α-form* (VIIα), b_4 87–9°, n_D^{25} 1.4730, d_{25} 0.9541, m. 72–3° (*picrate*, m. 142–3°; *HCl salt*, m. 195–6°), of I (R = Me, R′ = H) (VII). Similar methylation of IIβ gave the *β-form* (VIIβ), m. 77–8° (*picrate*, m. 181–2°; *HCl salt*, hygroscopic crystals). Heating 4.5 g. VIIα·HCl with 6 g. BzCl 20–30 min. to 150° gave after treatment with H_2O, extn. with Et_2O, and treatment with Na_2CO_3, 5.2 g. *α-form* (VIIIα) of I (R = Me, R′ = Bz) (VIII), b_2 135–6°, n_D^{25} 1.5170, d_{25} 1.0315 (*picrate*, m. 199–209°; *HCl salt*, m. 201–2°). Similarly VIIIβ gave the corresponding VIIIβ, b_3 128–30°, n_D^{25} 1.5100, d_{25} 1.0140 (*picrate*, m. 217–18°; *HCl salt*, uncrystallizable mass). Heating 4.55 g. IVγ with 1.88 g. 32% formalin and 1 g. 90% HCO_2H 40 min. on a steam bath gave 4.1 g. (VIIIγ), $b_{2.4}$ 136–7°, n_D^{25} 1.5195, d_{25} 1.0399 (*picrate*, m. 181–2°; *HCl salt*, m. 178–9.5°), which, heated 2 hrs. with 25% HCl on a steam bath, gave BzOH and VIIγ, b_4 88° (*picrate*, m. 167–8°; *HCl salt*, hygroscopic solid). Partial evapn. of 0.5 g. *2,5-*

1.4975, d_{25} 1.1245 (with $FeCl_3$ this gives an intense red color). The same product formed in 36.5% yield in the reaction with EtONa instead of Na for 40 min. at 90°; at lower temps. the yield rises, and at room temp. in 10 days was 55%. The pure product, b_1 134–6°, n_D^{25} 1.4938, solidifies on standing, m. 65–6° (from petr. ether). Hydrolysis of this with 22% HCl 32 hrs. on a steam bath gave 2,5-dimethyl-4-piperidinone. Hydrogenation of the ester Ac deriv. in EtOH over Raney Ni gave a *mixt. of stereoisomers of 1-acetyl-2,5-dimethyl-3-carbethoxy-4-piperidinol* (III), b_1 151–70°, which was sepd. into 5° fractions. The middle fraction, b_1 156–61°, n_D^{25} 1.4902, d_{25} 1.1185, solidified in part, yielding 1.6 g. III, m. 101–2°. The isomer mixt. (from 14.6 g. ketone) was treated in abs. EtOH with dry HCl,

(*picrate*, oil; *HCl salt*, m. 157–8°), along with 2 g. *benzoate of* VIα, b_3 167–70°, n_D^{20} 1.5105, d_{20} 1.0873 (*picrate*, m. 184–6°; *HCl salt*, m. 185–6°). Similar methylation of 4.1 g. IVβ, m. 158–9°, gave 88% *β-isomer* (VIβ) of VI, m. 87–8° (*picrate*, m. 168–9°; *HCl salt*, m. 174–5°); the latter HCl salt (3.7 g.) heated with BzCl to 160° as above gave 2.5 g. *HCl salt*, m. 213–14°, of *the benzoate* of VIβ, along with 1.9 g. *benzoate*, b_3 167–9°, n_D^{20} 1.5103, d_{20} 1.089, which solidified on standing, and m. 59–60° (from petr. ether) (*HCl salt*, m. 213–14°). To dry EtONa from 2.2 g. Na was added with cooling 7.1 g. HCO_2Et and 8.1 g. V in abs. C_6H_6, the mixt. kept 40 hrs. at room temp. in a closed flask, the ppt. sepd., washed with C_6H_6, treated with 20 ml. concd. HCl with addn. of small pieces of ice, and the soln. satd. with NaCl and extd. with C_6H_6, yielding 68% *1-acetyl-2,5-dimethyl-3-*

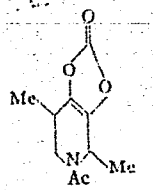




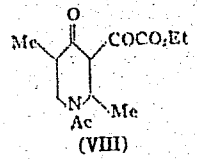
1.4975, d_{20} 1.1245 (with $FeCl_3$ this gives an intense red color). The same product formed in 36.5% yield in the reaction with EtONa instead of Na for 40 min. at 90°; at lower temps. the yield rises, and at room temp. in 40 days was 55%. The pure product, b_1 134–6°, $n^{20}D$ 1.4938, solidifies on standing, m. 65–6° (from petr. ether). Hydrolysis of this with 22% HCl 32 hrs. on a steam bath gave 2,5-dimethyl-4-piperidinone. Hydrogenation of the ester Ac deriv. in EtOH over Raney Ni gave a *mixt. of stereoisomers* of *1-acetyl-2,5-dimethyl-3-carbethoxy-4-piperidinol* (III), b_1 151–70°, which was sepd. into 5° fractions. The middle fraction, b_1 156–61°, $n^{20}D$ 1.4902, d_{20} 1.1185, solidified in part, yielding 1.6 g. III, m. 101–2°. The isomer mixt. (from 14.6 g. ketone) was treated in abs. EtOH with dry HCl, refluxed 28 hrs., the ppt. filtered off, and recrystd. from H_2O to give 3.4 g. high-melting *β-isomer* (IVβ), m. 153–9° (from C_6H_6) (*picrate*, m. 204–5°; *HCl salt*, m. 198–9°), of *2,5-dimethyl-3-carbethoxy-4-piperidinol* (IV). The EtOH soln. after the removal of the above, evapd. and subjected to treatment with dry HCl-EtOH 53 hrs. longer, yielded 1.2 g. low-melting *α-isomer* (IVα), m. 115–16° (from C_6H_6) (*picrate*, m. 142–3°; *HCl salt*, m. 185–6°). The isomer mixt. from the hydrogenation heated 60 hrs. with 10% HCl, evapd., and heated 16 hrs. longer with HCl-EtOH (dry) gave IVβ, m. 158–9°, and a smaller amt. of IVα, m. 115–16°. Heating the cryst. isomer, m. 101–2°, of III with dry HCl-EtOH 30 hrs. gave about 45% IVα, m. 115–16°. Reduction of 16.5 g. 1-acetyl-2,5-dimethyl-3-carbethoxy-4-piperidinone (V) with 750 g. 2.5% Na-Hg in 45% aq. EtOH, followed by cleavage of the Ac group with alc. HCl, gave 1.4 g. IVβ, m. 158–9°, and 5 g. mixed

isomers, $b_{1.5}$ 103–22°, from which was isolated 0.8 g. IV*α*, m. 115–16°. The isomeric mixt. of the III from hydrogenation of the ketone over Raney Ni was heated with BzCl 15 min. to 165–70°, treated with dry HCl 1 hr. at 160°, and taken up in H_2O, giving a low yield of the *2,5-dimethyl-3-carbethoxy-1-piperidyl acetate*, b_1 100–2°, n^{25}_D 1.4610, d_{20} 1.065, along with a similar yield of the *benzoate*, b_1 160–4°, n^{25}_D 1.5123, d_{20} 1.1145, both esters being *mixts. of stereoisomers*. Heating 4.4 g. IV*α* with 3.4 g. 29% formalin and 1.4 g. 90% HCO_2H on a steam bath 40 min., cooling, and treating the mixt. with K_2CO_3 soln. gave 4.3 g. *α-isomer* (VI*α*) *of 1,2,5-trimethyl-3-carbethoxy-4-piperidinol* (VI), b_1 112–13°, n^{25}_D 1.4778, d_{20} 1.0523 (*picrate*, m. 141–2°; *HCl salt*, m. 151–2°). The HCl salt (3.6 g.) heated with 6.1 g. BzCl to 160° 0.5 hr. gave, after evapn. of residual BzCl and treatment with H_2O, 0.7 g. *1,2,5-trimethyl-3-carbethoxy-Δ³-tetrahydropyridine*, b_2 109–10°, n^{25}_D 1.4765, d_{20} 0.9940 (*picrate*, oil; *HCl salt*, m. 137–8°), along with 2 g. *benzoate of* VI*α*, b_2 167–70°, n^{25}_D 1.5105, d_{20} 1.0873 (*picrate*, m. 184–5°; *HCl salt*, m. 185–6°). Similar methylation of 4.1 g. IV*β*, m. 158–9°, gave 88% *β-isomer* (VI*β*) of VI, m. 87–8° (*picrate*, m. 168–9°; *HCl salt*, m. 174–5°); the latter HCl salt (3.7 g.) heated with BzCl to 160° as above gave 2.5 g. *HCl salt*, m. 213–14°, of *the benzoate* of VI*β*, along with 1.0 g. *benzoate*, b_2 167–9°, n^{25}_D 1.5103, d_{20} 1.089, which solidified on standing, and m. 59–60° (from petr. ether) (*HCl salt*, m. 213–14°). To dry EtONa from 2.2 g. Na was added with cooling 7.1 g. HCO_2Et and 8.1 g. V in abs. C_6H_6, the mixt. kept 40 hrs. at room temp. in a closed flask, the ppt. sepd., washed with C_6H_6, treated with 20 ml. concd. HCl with addn. of small pieces of ice, and the soln. satd. with NaCl and extd. with C_6H_6, yielding 68% *1-acetyl-2,5-dimethyl-3-*

Na 2a [illegible] N.



(VII)



(VIII)

hydroxymethylene-4-piperidinone, m. 123–4° (from C_6H_6); if the product is distd. it forms an oil, b_1 138–9°, which slowly solidifies and m. 123–4°; it gives red color with $FeCl_3$; with $2,4\text{-}(O_2N)_2C_6H_3NHNH_2$ it forms a *pyrazole deriv.*, $C_{15}H_{11}O_8N_5$, m. 201–2°. Hydrogenation of the hydroxymethylene deriv. over Raney Ni leads to absorption of 2 moles of H. To a suspension of dry EtONa (from 4.2 g. Na) in dry C_6H_6 were added with cooling 29 g. $(CO_2Et)_2$ and 17 g. V in C_6H_6; after standing overnight at room temp. the mixt. was acidified with HCl with cooling and extd. with C_6H_6, yielding a white ppt. which was sepd. This (3.3 g.) was identified as the compd. (VII), decomp. 210°. The residual oil heated 15 min. to 150–60° yielded 12.2 g. more VII (total, 68% yield). VII is poorly sol. in org. solvents, but is sol. in alkalies, being reppted. on acidification. It gives a green color with $FeCl_3$-EtOH. Boiling VII with EtOH yields the oily material mentioned above, which is apparently *Et 1-acetyl-2,5-dimethyl-4-oxo-3-piperidineglyoxylate* (VIII). The results are similar when the condensation is run with alc. EtONa, or with Na in C_6H_6.

G. M. Kosolapoff

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NAZAROV, I.N.; SOKOLOV, D.V.; LITVINENKO, G.S.

Heterocyclic compounds. Report no.30: Condensation of γ-piperidones with esters of formic, oxalic, carbonic, and chlorocarbonic acids. Synthesis of cocaine analogs. Izv.AN SSSR. Otd.khim.nauk no.1:95-108 Ja-F '54. (MLRA 7:4)

1. Institut khimicheskikh nauk Akademii nauk Kaz.SSR.
(Condensation products (Chemistry)) (Esters) (Chemistry, Medical and pharmaceutical)

SOKOLOV, D. V. (Institut khimii AN KazSSR, Alma-Ata) (Institute of Chemistry AS Kazakhskaya SSR, Alma-Ata)

D. V. Sokolov, G. S. Litvinenko, and K. I. Khludneva, "Conformation of Stereoisomers of 2-Methyl-4-ketodekahydroquinoline and 2-Methyl-4-oxydekahydroquinoline and Some of Their Derivatives."

report presented at the Symposium on Concepts of Conformation in Organic Chemistry which took place in Moscow at the IOKh AN SSSR (Institute of Organic Chemistry, AS USSR) from September 30 to October 2, 1958.

Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1959, No. 3, 561-564.

Sokolov, D. V.

AUTHORS: Shidlovskaya, A. N., Syrkin, Ya. K., Nazarov, I. N., Sokolov, D. V., 62-2-22/28

TITLE: The Dipole Moments of the Steric Isomers of 2-Methyl-4-Keto-Decahydroquinolines (Dipol'nyye momenty prostranstvennykh izomerov 2-metil-4-ketodekagidrokhinolinov)

PERIODICAL: Izvestiya AN SSSR Otdeleniye Khimicheskikh Nauk, 1958, Nr 2, pp. 241-241 (USSR)

ABSTRACT: The authors measured the dipole moments of the above-mentioned isomers which were synthesized by Sokolov. Dielectric polarizations were determined according to the heterodyne method in benzene solutions (at 25°C). The results of this work are given in table 1. Formulae, melting temperatures as well as an information on the investigated concentrations, the full polarizations, P_∞, orientation polarizations P_{or} and so on are also given in the table. The congruence of the moments of all isomers indicates the similar configurations of the polar groups (table 1). There is 1 table.

~~Card 1/2~~

Inst. Fine Chem. Technol. im M. V. Lomonosov

SOKOLOV, D.V.; KHOKHLOVA, V.V.; PERMITINA, N.G.

Condensation of 1,2,5-trimethyl-4-piperidone with formaldehyde.
Vest.AN Kazakh.SSR 14 no.10:63-70 O '58. (MIRA 11:12)
(Piperidone) (Formaldehyde) (Condensation products (Chemistry))

SOKOLOV, D.V.; LITVINENKO, G.S.; ISIN, Zh.I.

Laboratory production of vinylacetylene from dimethylvinylethinylcarbinol. Izv.AN Kazakh.SSR.Ser.khim. no.2:68-71 '59. (MIRA 12:8)

(Acetylene)

5(3)

AUTHORS: Sokolov, D. V., Litvinenko, G. S., Khludneva, K. I. SOV/79-29-4-15/77

TITLE: III. Stereochemistry of Nitrogen Heterocycles (III. Stereokhimiya azotistykh geterotsiklov). III. Stereoisomers of 2-Methyl-4-ketodecahydroquinoline (III. Stereoizomeriya 2-metil-4-ketodekagidrokhinolina)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 4, pp 1112-1122 (USSR)

ABSTRACT: Upon suggestion of the late Academician I. N. Nazarov, the authors chose in continuation of their previous papers (Refs 1, 2) the easily accessible 2-methyl-4-ketodecahydroquinoline (I) as subject of stereochemical investigations, which is synthesized from the acetylene derivatives (Ref 3) according to scheme 1. It has three asymmetric carbon atoms and can theoretically occur in the form of four racemates. From among the four possible racemates the racemates (II), (III) and (IV), denoted in scheme 2 as α-, β-, and γ-isomer, were obtained. The fourth one, the δ-isomer (V) could only be obtained in the form

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of its benzoyl derivatives (Va) (for details see table). On repeated fractional recrystallization of the hydrogen chloride salts (I) from anhydrous alcohol the compounds (VII) and (VIII) resulted. The results of the investigation indicate that the initial mixture of the isomers of 2-methyl-4-ketodecahydroquinoline (I) consists chiefly of the stable α- and γ-isomers (II and IV) and partly of the less stable β-isomer (III). The very unstable δ-isomer (V) in the mixture apparently does not occur. For the time being it is not possible to solve the problem whether on the closure of the piperidine ring (see the scheme) immediately the more stable α- and γ-isomers (II) and (IV) or, at first, the less stable β and δ isomers (III) and (V) are formed on the double bond of the cyclohexane ring. The δ-isomer (V) is rapidly transformed into the γ-isomer (IV); the α- and β-isomers undergo mutual transformations by way of the hydrochloride into which compound (I) must be converted in order to separate it from neutral compounds. Thus, the conditions for the mutual transformations of stable isomers into unstable ones, and vice versa, are found.

III. Stereochemistry of Nitrogen Heterocycles. SOV/79-29-4-15/77
III. Stereoisomers of 2-Methyl-4-ketodecahydroquinoline

There are 1 table and 9 references, 4 of which are Soviet.

ASSOCIATION: Institut khimicheskikh nauk Akademii nauk Kazakhskoy SSR (Institute of Chemical Sciences of the Academy of Sciences of the Kazakhskaya SSR)

SUBMITTED: March 6, 1958

Card 3/3

5.3400

78200
SOV/79-30-3-20/69

AUTHORS: Sokolov, D. V., Litvinenko, G. S., Khludneva, K. I.

TITLE: Stereochemistry of Nitrogen-Containing Heterocycles. VIII. Benzoic Esters of 2-Methyl-4-Hydroxydecahydroquinoline and 1,2-Dimethyl-4-hydroxydecahydroquinoline Isomers. New Anesthetics

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 3, pp 831-838 (USSR)

ABSTRACT: This article is a continuation of previous work (Zhurnal obshchey khimii, 29, 3204 (1959); Ibid, 29, 3555 (1959) and is devoted to synthesis of benzoic esters of the five common alcohols (VII, mp 134°; VIII, mp 128°; XI, mp 144°; XII, mp 158°) with rings joined trans, and alcohol (XIII, mp 115°) with rings joined cis, as well as benzoic esters of these alcohols with methyl radicals at the nitrogen (scheme 2)

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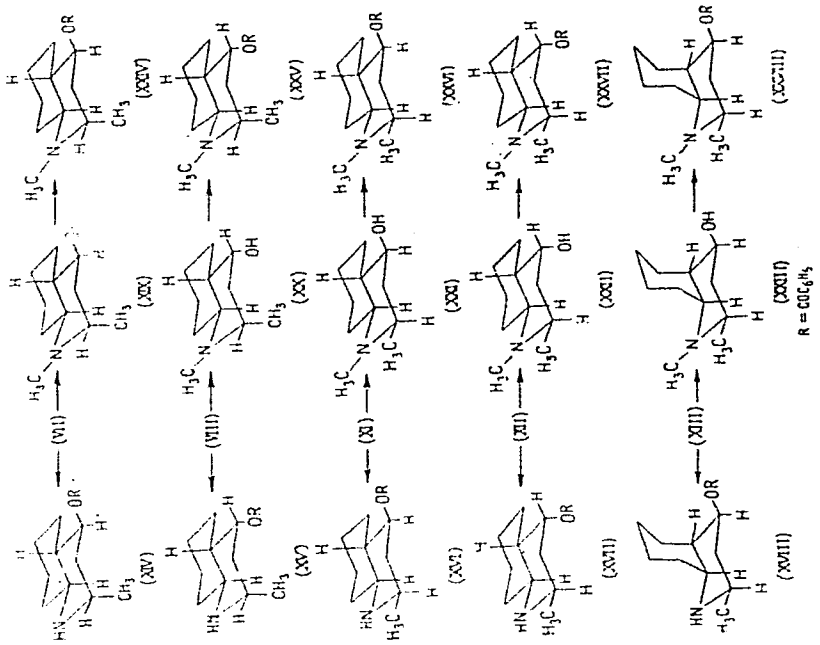
Stereochemistry of Nitrogen-Containing Heterocycles. VIII

78260
SOV/79-30-5-20/69

Scheme 2.



Card 2/8

Stereochemistry of Nitrogen-Containing Heterocycles. VIII

78266
SOV/79-30-3-20/69

Heating the hydrochlorides of racemic alcohols (VII), (VIII), (XI), and (XII) with benzoyl chloride results in good yield of benzoic esters of 2-methyl-4-hydroxy-decahydroquinoline, (XIV), (XV), (XVI), ans (XVII). Benzoic ester (XVIII) was obtained from N-benzoyl derivatives of alcohol (XIII) by the method described previously (above ref). The properties of the obtained esters are shown in Table 3. Heating the same alcohols with a mixture of formaldehyde and formic acid yields (90%) five corresponding racemates of 1,2-dimethyl-4--hydroxydecahydroquinoline, (XIX), (XX), (XXI), (XXII), and (XXIII). The properties of the obtained compounds are shown in Table 2. Compounds were converted into corresponding benzoic esters, (XXIV), (XXV), (XXVI),

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Sterochemistry of Nitrogen-Containing Heterocycles. VIII

78266
SOV/79-30-3-20/69

(XXVII) and (XXVIII). They are shown in Table 4. The majority of the synthesized compounds have strong anesthetic properties surpassing that of novocain, and especially cocain; some of them were comparable to dicain. The obtained compounds were tested at the Alma-Ata Medical Institute (chair of pharmacology) and at the Institute of Physiology of the Academy of Sciences of the Kazakh SSR (pharmacology laboratory), under the direction of I. I. Sivertsev. There are 4 tables; and 8 Soviet references.

ASSOCIATION: Institute of Chemical Sciences of the Academy of Sciences of the Kazakh SSR (Institut khimicheskikh nauk Academii nauk Kazakhskoy SSR)

SUBMITTED: March 19, 1959

Card 4/8

Table 2

	B	C	D	E
(XIX)	a) $C_{11}H_{13}ON$	50	93.5	116 - 117
	б) $C_{11}H_{12}ONCl$			238 - 239
	в) $C_{22}H_{24}O_2N_2$			159 - 159.5
(XX)	а) $C_{12}H_{15}ON$	78	92.5	148 - 149
	б) $C_{12}H_{14}ONCl$			257 - 258
	в) $C_{24}H_{28}O_2N_2$			175 - 176
(XXI)	а) $C_{13}H_{17}ON$	55	90.5	87 - 88
	б) $C_{13}H_{16}ONCl$		-	173 - 174
	в) $C_{26}H_{32}O_2N_2$		-	140 - 142
(XXII)	а) $C_{14}H_{21}ON$	25	79.2	130 - 131
	б) $C_{14}H_{20}ONCl$		-	150 - 151
	в) $C_{28}H_{40}O_2N_2$	-		192 - 193
(XXIII)	а) $C_{15}H_{23}ON$	25	86.0	99 - 100
	б) $C_{15}H_{22}ONCl$	-		192 - 194
	в) $C_{30}H_{44}O_2N_2$	-	-	149 - 151

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Table 3

A	B	C	D	E
(XIV)	а) $C_{17}H_{23}O_2N$ *	183—190°	84.6	
	б) $C_{17}H_{24}O_2NCl$	—	—	283—284°
	в) $C_{23}H_{28}O_9N_4$	—	—	208—209
(XV)	а) $C_{17}H_{23}O_2N$	197—198	64.6	77—78
	б) $C_{17}H_{24}O_2NCl$	—	—	269—271
	в) $C_{23}H_{28}O_9N_4$	—	—	256—257
(XVI)	а) $C_{17}H_{23}O_2N$	190—193	53.6	87 — 87.5
	б) $C_{17}H_{24}O_2NCl$	—	—	270—272
	в) $C_{23}H_{28}O_9N_4$	—	—	240—241
(XVII)	а) $C_{17}H_{23}O_2N$ **	197—199	83.5	
	б) $C_{17}H_{24}O_2NCl$	—		214—215
	в) $C_{23}H_{28}O_9N_4$	—	—	271—273
(XVIII)	а) $C_{17}H_{23}O_2N$ [7]	135—140	50.2	75—76
	б) $C_{17}H_{24}O_2NCl$	—	—	304—305
	в) $C_{23}H_{28}O_9N_4$	—	—	216—217

* d_4^{20} 1.0869, n_D^{20} 1.5396,
** d_4^{20} 1.0874; n_D^{20} 1.5380,

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Table 1

A	B	C	D	E
(XXIV)	a) $C_{18}H_{25}O_2N$	160—165°	99.0	62—63°
	б) $C_{18}H_{26}O_2NCl$	—	—	269—270
	в) $C_{21}H_{28}O_6N_4$	—	—	—
(XXV)	a) $C_{18}H_{25}O_2N$ *	160—165	84.0	41—42
	б) $C_{18}H_{26}O_2NCl$	—	—	204—205
	в) $C_{21}H_{28}O_6N_4$	—	—	233—234
(XXVI)	a) $C_{18}H_{25}O_2N$ **	145—150	97.0	
	б) $C_{18}H_{26}O_2NCl$	—	—	217—218
	в) $C_{21}H_{28}O_6N_4$	—	—	192—193
(XXVII)	a) $C_{18}H_{25}O_2N$ ***	140—145	87.7	
	б) $C_{18}H_{26}O_2NCl$	—	—	F
	в) $C_{21}H_{28}O_6N_4$	—	—	212—213
(XXVIII)	a) $C_{18}H_{25}O_2N$	150—155	95.0	57—58
	б) $C_{18}H_{26}O_2NCl$	—	—	252—254

* d_4^{20} 1.0844, n_D^{20} 1.5417,
** d_4^{20} 1.0702, n_D^{20} 1.5380,
*** d_4^{20} 1.0723, n_D^{20} 1.5398,

Card 7/8

Stereochemistry of Nitrogen-Containing Heterocycles. VIII

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SOV/79-30-3-20/69

Table 2. (A) Properties of isomeric 1,2-dimethyl-4--hydroxydecahydroquinolines and their derivatives; (B) formulas of isomers (a), their hydrochlorides (b) and picrates (c); (C) methylation time (in min); (D) yield (%); (E) mp.

Table 3. (A) Properties of 2-methyl-4-hydroxydeca-hydroquinoline benzoates and their derivatives; (B) formulas of benzoates (a), their hydrochlorides(b), and picrates (c); (C) benzoylation temperature; (D) yield, (%); (E) mp.

Table 4. (A) Properties of 1,2-dimethyl-4-hydroxy-decahydroquinoline benzoates and their derivatives; (B) formulas of benzoates (a), their hydrochlorides (b) and picrates (c); (C) benzoylation temperature; (D) yield (%): (E) mp; (F) hygroscopic.

Card 8/8

SOKOLOV, D. V.

Doc Chem Sci - (diss) "Study in the area of stereochemistry of oxygen derivatives of piperidine and decahydroquinoline and the synthesis of anesthetizing compounds." Moscow-/Alma-Ata, Pub. Academy of Sciences Kazakh SSR/, 1961. 34 pp; (Academy of Sciences USSR, Inst of Organic Chemistry imeni N. D. Zelinskiy); 200 copies; price not given; list of author's works on pp 33-34 (16 entries); (KL, 10-61 sup, 206)

AGASHKIN, O.V.; LITVINENKO, G.S.; SOKOLOV, D.V.; CHASNIKOVA, S.S.

Stereochemistry of nitrogen heterocycles. Part 11: Infrared spectra of the family of 2-methyl-4-hydroxydecahydroquinoline stereoisomers. Zhur. ob. khim. 31 no.3:862-870 Mr '61. (MIRA 14:3)

1. Institut khimii AN Kazakhskoy SSR.
(Quinoline--Spectra)

SOKOLOV, D. V.

Dissertation defended for the degree of Doctor of Chemical Sciences at the Institute of Organic Chemistry imeni N. D. Zelinskiy in 1962:

"Investigation in the Field of the Stereochemistry of Oxygen Derivatives of Piperidine and Decahydroquinoline and Syntheses of Anesthetizing Compounds."

Vest. Akad. Nauk SSSR. No. 4, Moscow, 1963, pages 119-145

SOKOLOV, D.V.; LITVINENKO, G.S.; ARTYUKHIN, V.I.

Stereochemistry of nitrogen heterocycles. Part 10: Steric directivity in hydrogenation of isomers of 2-methyl-4-ketodecahydroquinoline. Reduction of isomers of 1-benzoyl-2-methyl-4-ketodecahydroquinoline by aluminum isopropylate. Izv.AN Kazakh. SSR. Ser.khim. no.1:75-82 '61. (MIRA 16:7)

(Heterocyclic compounds) (Stereochemistry)

L 49013-65

ACCESSION NR: AR5012262 UR/0058/65/000/003/D036/D036

SOURCE: Ref. zh. Fizika, Abs. 3D270

AUTHOR: Agashkin, O. V.; Chasnikova, S. S.; Litvinenko, G. S.; Sokolov, D. V.

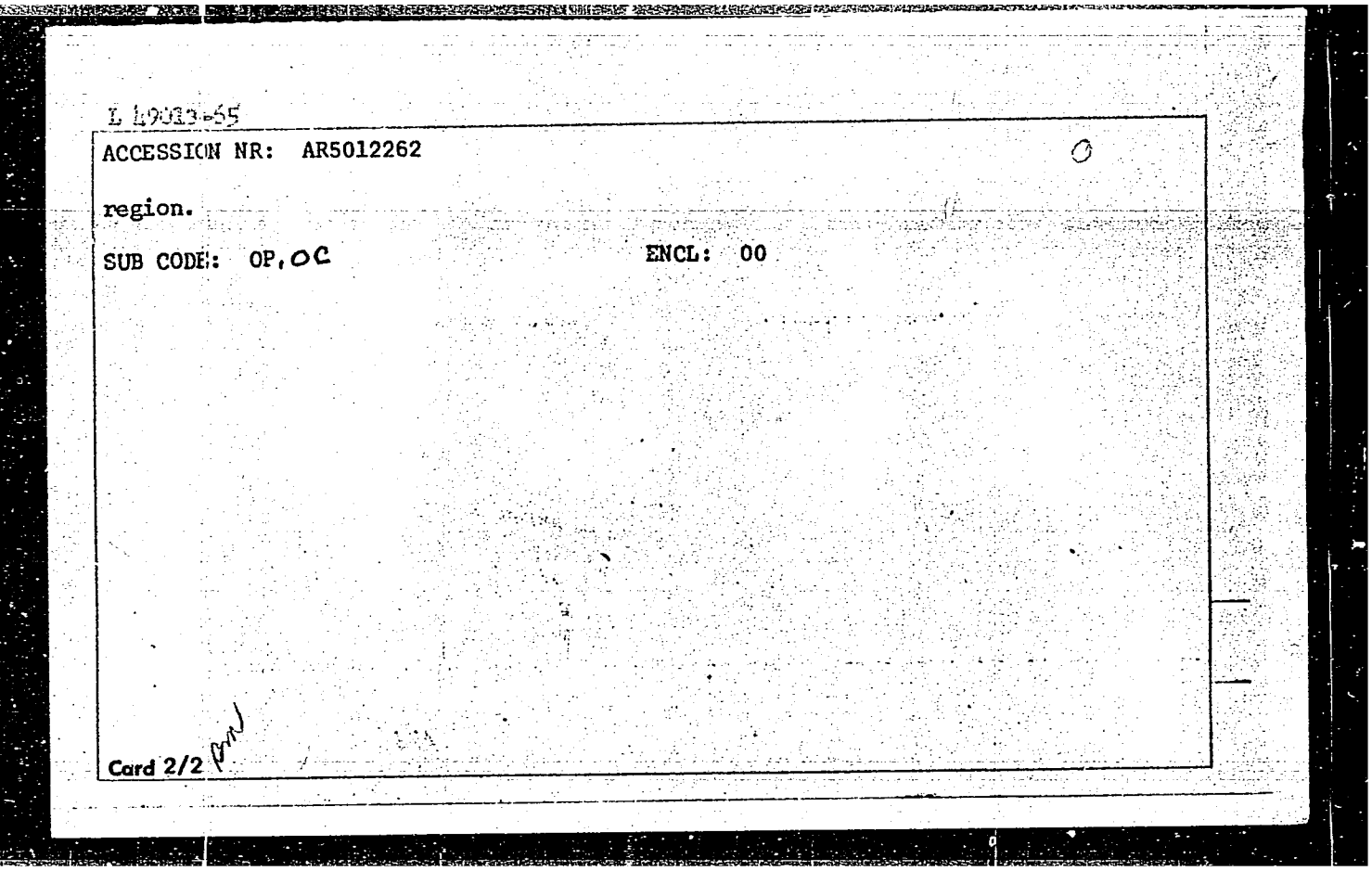
TITLE: Infrared and ultraviolet spectra of several batch alcohols

CITED SOURCE: Tr. Komis. po spektroskopii. AN SSSR, vyp. 1, 1964, 330-336

TOPIC TAGS: spectroscopy, ir spectra, ultraviolet spectra, batch alcohol

TRANSLATION: The equilibrium constants for monomers ⇄ associates were determined by measuring the intensities of bands of free and bonded hydroxyls in the infrared absorption spectra of solutions of stereoisomer batch alcohols. It was found that for equal conditions the larger equilibrium constants correspond to associates of equatorial isomers, rather than to associates of their axial epimers. The energies of hydrogen bonds, formed by various stereoisomers and corresponding to steric coefficients, were determined from temperature relations of equilibrium constants. It is explained that equatorial isomers form stronger hydrogen bonds than axial isomers. A test to interpret the observed effects was made by obtaining data on the electronic spectra of stereoisomer alcohols in the near and vacuum ultraviolet

Card 1/2



L 49033-65

ACCESSION NR: AR5012262 O

region.

SUB CODE: OP,OC ENCL: 00

Card 2/2 pm

SOKOLOV, D. V.

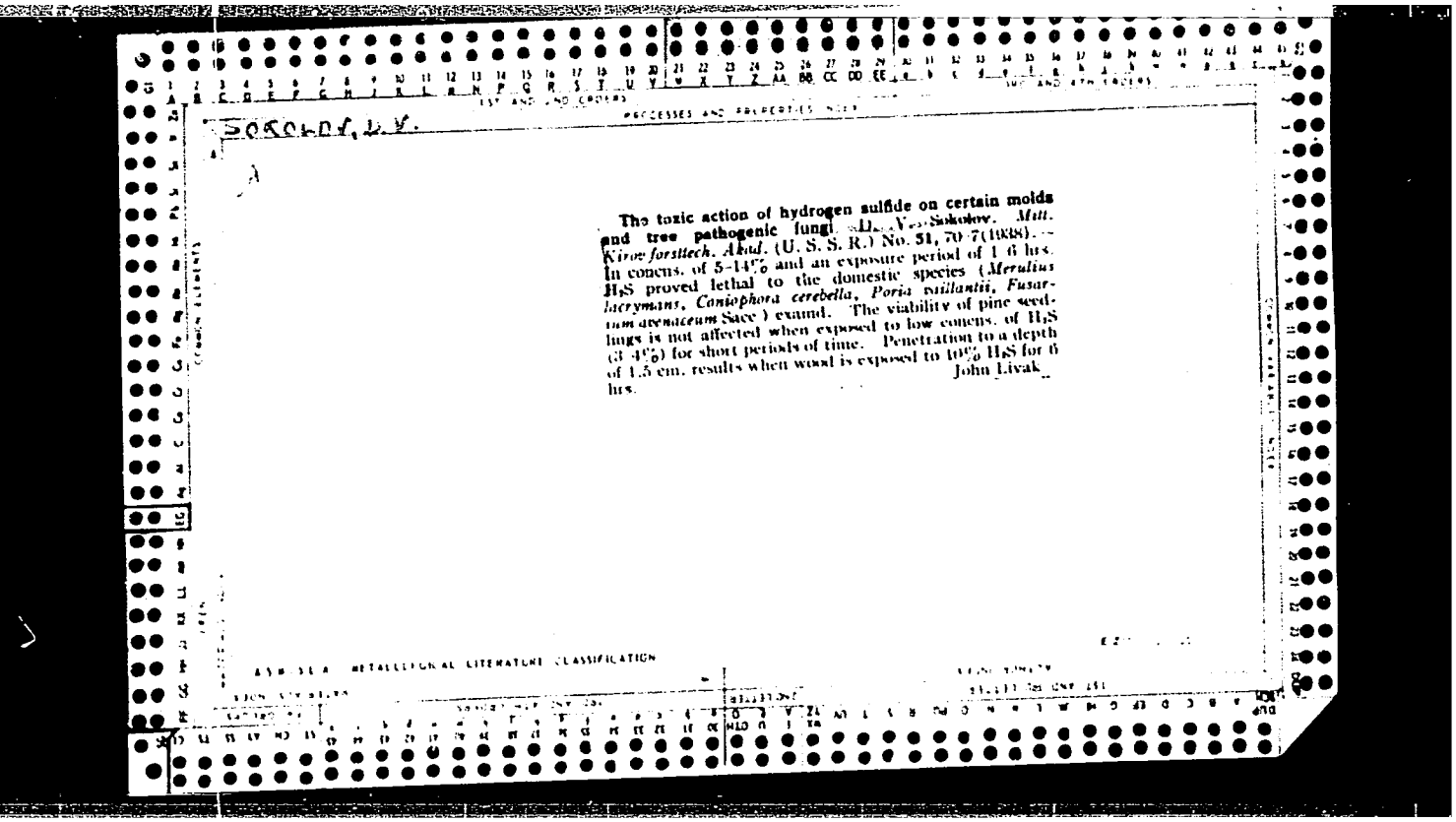
VANIN, S. I., ANDREYEV, I. E. AND SOKOLOV, D. V. "On the Effect of Wood-destroying Fungi on Wood Coated with Paint and Varnish," Izvestiia Leningradskogo Instituta Bor'by s Vrediteliami v Sel'skom i Lesnon Khoziaiatve, no. 3, 1932, pp. 45-46, 423.92 P543

SO: SIRA SI-90-53, 15 Dec. 1953

SOKOLOV, D. V.

"Experiments for Controlling Diseases of Trees in Shelterbelts," Itogi Nauchno-Issledovatel'skikh Rabot Vsesoiuznogo Institute Zashchity Rastenii za 1936 Goda, part 1 1937, pp. 238-242. 423.92 L541

So: Sira-Si-90-53, 15 Dec. 1953



Sokolov, D. V.

The toxic action of hydrogen sulfide on certain molds and tree pathogenic fungi. D. V. Sokolov. *Mitt. Kirov forsttech. Akad.* (U. S. S. R.) No. 51, 70-7(1938). — In concns. of 5-14% and an exposure period of 1-6 hrs. H_2S proved lethal to the domestic species (*Merulius lacrymans*, *Coniophora cerebella*, *Poria vaillantii*, *Fusarium aroinaceum* Sacc.) examd. The viability of pine seedlings is not affected when exposed to low concns. of H_2S (3-4%) for short periods of time. Penetration to a depth of 1.5 cm. results when wood is exposed to 10% H_2S for 6 hrs.

John Livak

SOKOLOV, B. V.

23134 Kornevaya gnil' i nekotoryye drugiye bolezni shelkovitsy v zakavkaz'ye. v SB: issledovaniya po les. khoz-vu. 1., 1948 /na obl: 1949./, c. 267-79. - Bibliogr: 5 Nazv.

SO: LETOPIS NO. 31, 1949

SOKOLOV, D.V.

Vanin, S.I. and Sokolov, D.V. "Investigation of the fungicidal characteristics of phytocides and antibiotics", Trudy Lesotekhn. Akd. im. Kirova, No. 63, 1948, p. 113-20, -Bibliog: 14 items.

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 9, 1949)

SOKOLOV, D. V.

20918 Sokolov, D. V. Polezni drevesnykl i kustarnikovykh porod i ikh znacheniye v polezashchitnykh lesonasazhdeniyakh. Izvestiya Vsesoyuz. geogr. o-va, 1949 vyp. 3, s. 282-89. - Bibliogr: 6 nazv.

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva, 1949

SOKOLOV, D. V.

"Diseases of Trees and Shrubs and Their Importance in the Shelterbelt Tree Plantings," Izvestiia Vsesoiuznogo Geograficheskogo Obschestva, no. 81, 1949, pp. 282-289. 511 L546.

Sc: Sira-Si-90-53, 15 Dec. 1953

SOKOLOV, D. V.

VANIN, S. I., VOLKOV, R. S., and SOKOLOV, D. V. "In Regard to Studying the Fungus Diseases of Acorns," Nauchnye Voprosy Polezashchitnogo Lesa Razvedeniia, Institut Lesa, Akademiia, Nauk SSSR, vol, 1951, pp. 276-284. 99.9 M-LN

SO: SIRA SI-90-53, 15 Dec. 1953

VANIN, Stepan Ivanovich, professor, 1890-1951; SOKOLOVA, D.V., redaktor; DRONZHEVSKIY, V.M., redaktor; ARNOL'DOVA, K.S., redaktor; ANKUDINOV, A.M., retsenzent; VORONTSOV, A.I., retsenzent; KARASIK, N.P., tekhnicheskiy redaktor.

[Forest phytopathology]Lesnaia fitopatologiia.Izd. 4-e, posmertnoe (perer. i dop.). Pod obshchei red. D.V.Sokolova. Moskva, Goslesbumizdat, 1955. 416 p. (MIRA 8:4)
(Botany--Pathology)

SOKOLOV, D. V.

rUR[illegible]V. Lev Iva[illegible]ch, professor [deceased]; [illegible], N.A., [illegible]; KHOKHRYAKOV, M.K., doktor biologicheskikh nauk; [illegible], [illegible]; [illegible], SOKOLOV, D.V., dotsent; ZHURAVLEV, I.I., kandidat biologicheskikh nauk; BREZHNEV, I.I., kandidat biologicheskikh nauk; TOMSHINSKAYA, N.I., redaktor; POPRYADUKHIN, tekhnicheskiy redaktor

[Guide to the lower plants] Opredelitel' nizshikh rastenii; v piati tomakh. Moskva, Gos.izd-vo "Sovetskaia nauka." Vol.4. [Fungi] Griby. Pod obshchei red. L.I.Kursanova. 1956. 448 p. (MLRA 10:10)
(Fungi)

USSR / Plant Diseases. Forest Trees. 0-1

Abs Jour: Ref Zhur-Biol., 1958, No 17, 78001

Author : Sokolov, D. V.
Inst : Not given
Title : Honey Fungus and Its Control.

Orig Pub: Tr. Leningr. lesotekhn. akad., 1957, 81, ch. 3, 61-73

Abstract: The fungus Armillaria mellea (Vahl. ex Fr.) Karst affects 200 species of plants, and has spread to all parts of the world. The conditions of temperature, humidity and pH that favor the development of A. emllea are indicated. Prophylactic and therapeutic measures are described for the

Card 1/2

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USSR / Plant Diseases. Diseases of Forest Species.

Abs Jour : Ref Zhur - Biologiya, No 22, 1958, No. 100550

Author : Vanin, S. I.; Bazhenova, L. A.; Zhuravlev, I. I.; Sokolov, D. V.

Inst : Leningrad Forest Technology Academy

Title : Phytopathological Condition of Larch Plantings in Lindulovskaya Grove and Technical Properties of Their Wood

Orig Pub : Tr. Leningr. lesotekhn. akad., 1957, vyp 82, ch. 1, 105-116

Abstract : A phytopathological survey in 1949 of Lindulovskaya grove, laid in 1738-1805 in Roshchinskiy forest range in Leningradskaya oblast', showed a severe infection of larch tree stands with root rots. 33% of trees were affected with the root-rot fungus (Fomes annosus), 26% - with Schweinitz pore fungus (Polyporus schweinitzii) and

Card 1/3

VAKIN, A.T., prof.; GOLOVIN, P.N., prof., doktor biolog.nauk; DOBROZRAKOVA, T.L., dotsent; ZHURAVLEV, I.I., doktor sel'skokhoz.nauk; POLYAKOV, I.M.; SOKOLOV, D.V., dotsent; STEPANOV, K.M., doktor biolog.nauk; TUPENEVICH, S.M., prof.; FEDORINCHIK, N.S., kand.sel'skhokhoz.nauk; FEDOTOVA, T.I., doktor sel'skokhoz.nauk; KHOKHRYAKOV, M.K., doktor biolog.nauk; CHIGAREV, G.A., kand.sel'skokhoz.nauk; YATSENKO, I.P., prof. [deceased]; REUTSKAYA, O.Ye., red.; CHUNAYEVA, Z.V., tekhn.red.

[A phytopathologist's dictionary - reference gook] Slovar'-spravochnik fitopatologa. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 414 p. (MIRA 13:1)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Polyakov).
(Plant diseases--Dictionaries)
(Russian language--Dictionaries)

DECEASED

SOKOLOV, D. Ya.

1962

1964

HYDRAULIC ENGINEER

SOKOLOV, Dmitriy Yakovlevich. Prinimal uchastiye YUSHMANOV, Yu.L., kand. tekhn. nauk; SAFONOV, P.V., red.

[Use of water power] Ispol'zovanie vodnoi energii. Moskva, Kolos, 1965. 445 p. (MIRA 18:10)

SOKOLOV, D.Yu.

Hypersthene from dacite from Glubokoye in Transcarpathia. Min. sbor. no.5:340-341 '51. (MLRA 9:12)

1. Gosuniversitet imeni Ivana Franko, L'vov.
(Transcarpathia--Hypersthene) (Transcarpathia--Dacites)

SOKOLOV, E.M., inzh.

Gas liberation in extraction drifts of the Moscow Basin.
Izv. vys.uchev.zav.:gor.zhur. 7 no. 4:97-99 '64. (MIRA 17:7)

1. Tul'skiy politekhnicheskiy institut. Rekomendovana kafedroy rudnichnoy ventilatsii i tekhniki bezopasnosti.

BYKOV, L.D., prof.; KLIMAKOV, A.D., dotsent; [illegible], V.M., [illegible]; SUTIA, M.B., inzh.

Liberation of gas and calculation of the amount of air necessary for sections with powered, movable supports and complexes. Izv. vys. ucheb. zav.; gor. zhur. 7 no.10:56-60 '64.

(MIRA 18:1)

1. Tul'skiy politekhnicheskiy institut. Rekomendovana kafedroy promyshlennoy aerologii i tekhniki bezopasnosti.

5(3) SOV/80-32-4-46/47

AUTHORS: Pigulevskiy, G.V., Kuranova, I.L. and Sokolov, E.V.

TITLE: The Interaction of Ammonia With the Oxide of Petroselinic Acid (Vzaimodeystviye ammiaka s okis'yu petrozelinovoy kisloty)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 937-938 (USSR)

ABSTRACT: The authors synthesized the oxyaminostearic acid by means of interaction of ammonia with the oxide of petroselinic acid. On the basis of treatment this acid with lead tetraacetate and the analysis of the products resulting from the reaction, the authors conclude that the oxyaminostearic acid should have the structure of 6-amino-7-oxyoctadecanoic acid of the following form:

$$CH_3-(CH_2)_{10}-\underset{OH}{CH}-\underset{NH_2}{CH}-(CH_2)_4-COOH$$

Card 1/2

The Interaction of Ammonia With the Oxide of Petroselinic Acid

Its melting point is 133 - 134°C. The detailed procedure of obtaining this acid was described in the note.
There are 7 references, 3 of which are Soviet, 2 German, 1 American and 1 French.

SUBMITTED: July 2, 1958

SOKOLOV, F.

Here they work in a communist way. NTO 5 no.7:22-23 Jl '63.
(MIRA 16:8)

1. Predsedatel' soveta nauchno-tekhnicheskogo obshchestva Irkutskoy slyudyanoy fabriki.
(Irkutsk—Mica)

SOKOLOV, F.A.; KLIMENOK, B.V.

Kinetics of complexing during the reaction of oil with a carbamide water solution. Izv. vys. uch. zav.; neft' i gaz 5 no.9:57-61 '62. (MIRA 17:5)

1. Ufimskiy neftyanoy institut.

SOKOLOV, F.A.; STANKEVICH, B. Ye.; TOROPTSEV, N.G.

Developing methods for recovering sodium hydroxide from the alkali wastes of petroleum refining. Trudy Bash NII NP no.3:153-157 '60. (MIRA 14:4)
(Sodium hydroxide)

SOKOLOV, F.A.; STANKEVICH, B.Ye.; TOROPTSEV, N.G.

Development of methods for the utilization of sulfur removed in the refining of clear petroleum products. Khim.sera-i azotorg.soed.sod. v neft.i nefteprod. 3:407-410 '60. (MIRA 14:6)

1. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefti.

(Sulfur) (Petroleum products)

SOKOLOV, F.A.; FRYAZINOV, V.V.; KLIMENOK, B.V.

Removing paraffins from the filtrates of paraffin production using aqueous solution of carbamide. Izv. vys. ucheb. zav.; neft' i gaz 5 no.7:73-76 '62. (MIRA 16:7)

1. Ufimskiy neftyanoy institut.
(Paraffins) (Urea)

S/152/63/000/003/003/005
B117/B186

AUTHORS: Sokolov, F. A., Syrkin, A. M., Klimenok, B. V.

TITLE: Induction period of the complex formation of N-paraffins of petroleum fractions with aqueous carbamide solution

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, no. 3, 1963, 65-70

TEXT: The factors determining duration and character of the induction period were studied. Experiments were made at 25-26°C with filtrates obtained from paraffins of Tuymazy petroleum after extraction of the oil (boiling points up to 300-480°C). The induction period was calculated as the time from the beginning of mixing to the beginning of complex formation attended by a strong increase in temperature. The following processes occurred during this period: development of the contact surface of liquid phases which adsorb the tars from the oil and prevent a contact between the N-paraffin and carbamide molecules. Further dispersion of the system forms free surface and permits complex formation. Adsorbed tars are desorbed and pass over to the surface of the complex. Desorption of tars

and their removal from the contact surface enables new crystals to form which, on their part, adsorb tars from the contact surface of the liquid phase, and so forth. Thus an avalanche-like complex formation terminates the induction period. A higher weight ratio aqueous phase / oil shortens the induction period. It is the shorter the faster the surface development, and should be shortened by: (1) more intensive mixing; the contact surface of the liquid phase should be sufficiently large to remove the principal amount of tar from the oil; (2) reducing the viscosity and facilitating the emulsification by adding solvents and admixtures. Experiments with oils of different qualities and component ratios (oil, carbamide, water) showed that a repeated treatment of the oil with aqueous carbamide solution removed only part of the tars. This indicates that two types of tar are present in the petroleum: tar adsorbable on the crystal surface of the complex (I), and non-adsorbable tar (II). The strong inhibiting action of (I) is due to its high oxygen content. Addition of seeds reduced the induction period but did not fully eliminate it. Probably, they removed only (I) while (II) was left causing the short induction period. It is therefore recommended to add only the amount of seed required for removing (I) in order to reach maximum shortening of the induction period. There are 3 figures and 5 tables.

ASSOCIATION: Ufimskiy neftyanoy institut
(Ufa Petroleum Institute)

SUBMITTED: October 2, 1962

SOKOLOV, F. A.

32593. Zyablevaya Vspashka --- Reshayushcheye Usloviye Polucheniya Vysokogo Urozhaya Khlopka. Sots. Sel. Khoz-vo Uzbekistana, 1949, No. 3, s. 15-21

SO: Letopis' Zhurnal'nykh Statey, Vol 44 , Moskva, 1949

SOKOLOV, E. A.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr. 1954)

Name	Title of Work	Nominated by
Sokolov, E. A.	"Cotton Growing" Textbook	Ministry of Agriculture Uzbek SSR

SO: W-31604, 7 July 1954

SOKOLOV, F. A.

Dissertation: "Presowing Treatment of the Soil." Cand Agr Sci, Tashkent Agricultural Inst, 1 Jul 54. (Pravda Vostoka, Tashkent, 8 Jun 54)

SO: SUM 318, 23 Dec 1954