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B-II-5

Benzylation of cellulose under technical conditions. II. N. I. Nikitin and M. A. Avinov (J. Appl. Chem. Russ., [illegible], 6, 710—718).—Cotton-wool (1 pt.) is soaked during 18—24 hr. in 35% NaOH, which is then squeezed out until the product has 3 times its original wt., when it is heated at 100° with 2·6 pts. of CH_2PhCl (I) during 3 hr., 2 pts. of NaOH are added, and the mixture is heated for a further 4 hr. The benzylcellulose obtained contains > 2 $O\cdot CH_2Ph$ per $C_6H_{10}O_5$ unit, has a relative viscosity of 2·3—4·8, and is 90—95% sol. in C_6H_6–EtOH. 56% of the NaOH introduced is used in the side-reaction of hydrolysis of (I). (I) remaining after completion of the reaction is recovered by extraction with benzine, and residual NaOH by extraction with H_2O. R. T.

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23

C1

The ethylation of cellulose II N. I. Nikitin and T. I. Rudneva. *J. Applied Chem.* (U. S. S. R.) 6, 716-20(1933); cf. *C. A.* 27, 5064. -- Ethylation of cellulose occurs with C_2H_4I at a slightly higher rate than with C_2H_4Br and at a considerably higher rate than with C_2H_4Cl. With C_2H_4I ethylation is completed in 2 hrs., it approaches the triethylcellulose stage. The reaction is much more vigorous with all ethyl halides at 100° than at 120°. Products of a low degree of ethylation had a tendency to swell in benzyl chloride, while medium and highly ethylated cellulose went completely in soln.

Partially ethylated cellulose was treated with benzyl chloride in the presence of 23% NaOH for 3-4 hrs., dry NaOH was then added (35-40%) and the reaction continued for 3-8 hrs. at a temp. of 100-120° and with constant agitation. The benzyl chloride was then distd. off with steam. This method failed to give completely substituted cellulose. A table gives the m. ps. of a number of ethyl, benzyl and ethylbenzyl derivs. of cellulose.

A. A. Boehtlingk

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BC

a-1

Decomposition of cellulose by hot concentrated aqueous alkalis. N. I. NIKITIN and N. P. NEMTSOVA (J. Appl. Chem. Russ., 1933, 6, 845-849).—The viscosity η of solutions of cotton-wool cellulose which has been immersed for 6 hr. in 20-50% NaOH falls from 9·2—9·4 to 2·0—2·7 when the temp. is raised from 80° to 140°. When the time of immersion is increased to 16 hr. there is little further diminution in η. The Cu val. of the product rises with rising temp. of immersion. R. T.

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CA

23

Preparing propyl-, butyl- and amylcellulose by the action of various halogen alkyls. N. I. Nikitin and I. M. Orlova. *J. Applied Chem* (U. S. S. R.) 6, 1093-1104(1933).—The following reaction was investigated: $[C_6H_7O_2(OH)_3]_n + 3n\ NaOH + 3n\ C_3H_7Cl = [C_6H_7O_2(OC_3H_7)_3]_n + 3n\ NaCl + 3n\ H_2O$. In addn. to the above reaction of ether formation, a side reaction due to the interaction of the alkyl halide with NaOH takes place. This is accompanied by the formation of the corresponding alc. and a salt or there is a splitting of the halogen acid accompanied by the formation of an olefin. Finely divided filter paper was soaked in 38% NaOH for 18 hrs., pressed to 1/4 of its wt., grounded with the corresponding amt. of solid NaOH, and heated in glass tubes with alkyl halide. The contents of the tubes were placed in water, heated to boiling to distil off the low-boiling alkyl halides and steam-distil to drive off the high-boiling halogen deriva. and the alc. formed in the reaction. The product was washed with acidified and pure H_2O to the disappearance of the alkali and the halogen reaction, and dried to const. weight in a vacuum desiccator. The soly. was tested in Schweitzer reagent, as well as in some org. solvents such as pyridine, alc.-benzene, ether and AcOH.

As a rule the highly alkylated products were amorphous and were completely sol. in pyridine, alc.-benzene and benzene. The unchanged and the slightly alkylate cellulose retained the fibrous structure and soly. in Schweitzer reagent. Alkylation with butyl and isobutyl chlorides yielded only a low degree of etherification, while EtBr and isobutyl bromide yielded products contg. 2.25 OC_4H_9 groups per $C_6H_7O_2$. Bu and isobutyl iodides yielded products with only 1 OC_4H_9 group. The alkylation of the alk. cellulose with BuBr yielded compds. which corresponded approx. to the formulas $C_6H_7O_2(OC_4H_9)_2$ or $C_6H_7O_2(OC_4H_9)_3$, which were completely sol. in C_6H_6 and alc.-benzene and which produced films from a C_6H_6 soln. Among the isoamyl halides the bromide gave the best, but still an unsatisfactory, alkylation. Alkylation with PrBr yielded products contg. 2.5-3 alkyl groups per $C_6H_7O_2$, while the other halides did not yield satisfactory results.

A. A. Boehringk

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23

Ca

New studies in the field of lignin chemistry. N. I. Nikitin. *Tsentral. Nauch.-Issledovatel. Inst. Bumazhnoi Prom., Materialui* 1934, No. 4, 19-34. The progress made in the last 10 years is reviewed. Chas. Blanc

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BC

L-4

Arabogalactan of Siberian larch. N. I. Nikitin and I. A. Solovyev (J. Appl. Chem. Russ., 1935, 8, 1016—1022).—The arabogalactan (I) (1 mol.) with 12 mols. of NaOH and 13 of Me_2SO_4 yields a *product* in which all the available OH-groups (20) are methylated. (I), CH_2PhCl, and NaOH (80°; 16 hr.) afford the *dibenzyl ether*, and (I), BzCl, and NaOH (with cooling) give the Bz_5 *ester*. The mol. wt. of (I) cannot be determined cryoscopically, as the depression of f.p. is not ∝ concn.; the I val. method gives a mol. wt. corresponding with $[C_5H_8O_4(C_6H_{10}O_5)_6]_n$.

R. T.

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BC

Action of ethylene oxide on cellulose. I. N. I. NIKITIN and T. I. RUDNEVA (J. Appl. Chem. Russ., 1935, 8, 1023—1032).—Bleached cotton-wool (I) and $(CH_2)_2O$ at 50° afford a product containing 1 $OH\cdot CH_2\cdot CH_2\cdot O\cdot$ (II) per 32 $C_6H_{10}O_5$ units; the proportion rises to 1 : 4—8 in presence of dil. alkalis, and attains a max. of 1 : 1·5 in presence of 18% NaOH or 35% KOH (50—60°; 15 min.). The products are much more readily hydrolysed and acetylated than is (I), but the velocity of benzoylation is not affected; they yield highly viscous solutions in NaOH, the viscosity rising with the no. of (II) introduced. R. T.

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BC

Action of ethylene oxide on wood and lignin. II. N. I. NIKITIN and T. I. RUDNEVA (J. Appl. Chem. Russ., 1935, 8, 1176—1183).—Willstätter lignin treated with 16% NaOH and $(CH_2)_2O$ (I) (2 hr. at 70°, or 2 days at room temp.) yields amorphous hydroxyethyl-lignin (II), containing 28-76% of OEt + OMe, and 5-18% of acetylatable OH. (I) is eliminated from (II) by HI at 135—140°, but not by hydrolysis with 5% H_2SO_4 (5 hr. at the b.p.), which, however, transforms 21-6% of (I) into a H_2O-sol., non-reducing product. A product apparently identical with (II) is obtained from wood by treatment successively with NaOH and (I), followed by hydrolysis with 5% H_2SO_4. The hygroscopicity and swelling capacity of (II) are > those of lignin. R. T.

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The action of benzaldehyde on lignin. N. I. Nikitin and I. M. Orlova. *J. Applied Chem. (U. S. S. R.)* 8, 1402-8 (in German 1408-9) (1935). Elm lignin, heated at 120° in a sealed tube with 12 times its wt. of BzH, dissolves. In the presence of HCl, 85° is sufficient. Under these conditions, BzH will not dissolve lignin directly from wood. Centrifuging the soln. gives 1.6% insol. material. Et_2O ppts. 60-70% and petroleum ether a further 8-25% of the substance. The residue is obtained by distg. off the BzH. The fractions appear to be decompn. products of lignin.

H. M. Leicester

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B-II-5

Preparation of cellulose phthalates. N. I. Nikitin and I. M. Orlova (J. Appl. Chem. Russ., 1935, 8, 1410—1414).—Cellulose and starch yield phthalates in which > 0·25 OH group per $C_6H_{10}O_5$ unit is substituted by the Schotten-Baumann reaction with $C_6H_4(COCl)_2$, whilst under analogous conditions galactomannan gives 50% esterification. In org. solvents (C_5H_5N and $PhNO_2$ at 120—160°) > 1 OH is substituted. The esters are distinguished by their low solubility, and the low degree of esterification is attributed to formation of an insol. layer on the surface of the fibres, which prevents penetration of the reagents. R. T.

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Ca

Rapid determination of viscosity of unbleached viscose pulp N. I. Nikitin and I. A. Nagrodskii. *Bumazhnaya Prom.* 14, No. 12, 13-19 (1935). Wash and sep. a sample from an uncooked portion in a sieve, and press out by hand to a nearly const. wt. Det. the Bjorkman no. in a sep. sample. Place the prepd. sample corresponding to 1 g. of oven dry pulp in a 100 cc. flask contg. 70 cc. H_2O (55°) and $Ca(ClO)_2$ in an amt. corresponding to the Bjorkman no., bleach at 55° for 10 min. with shaking at 30 sec. intervals, filter off the pulp in a Buchner funnel, wash with 300 cc. H_2O (30°), place in a glass tube and dry at 105° in a drying oven while passing warm air through the tube. Treat 0.7 g. of the dry pulp with 20% NH_4OH for 3 min., dissolve it in 35 cc. of Schweitzer's reagent in a 60 cc. brown colored flask at 20° for 10 min. Replace the glass stopper by a rubber stopper fitted with a viscometer pipet and a glass cock connected with an atomizer rubber bulb. Pump the soln. into the pipet, open the cock and det. the viscosity. For the control of viscosity in the process of bleaching of viscose pulp, the bleaching operation in the detn. is omitted. Chas. Blanc

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Delignification of fir wood pulp by means of dioxane and the composition of natural lignin N. I. Nikitin and I. M. Orlova. *J. Applied Chem.* (U. S. S. R.) 9, 2210-1410 German 2215-1030). Fir pulp was treated on a water bath for 12-22 hrs. with 8 parts dioxane in the presence of HCl as catalyst (0.12-0.75% by the wt. of the dioxane), yielding 16-23.7% (by wt. of pulp) of a crude lignin. Lignin prepd. from the dioxane soln. with ether had the compn. C 57.61, H 5.6-6.4, and MeO groups 12.1-13.8%, depending on the amt. of catalyst and the duration of the treatment, i. e., it was similar to that obtained by Willstätter. One third of the crude lignin was easily dissolved in hot water, yielding a lignin of the compn. C 64.07, H 5.25, and MeO groups 15.2-15.8%. Further treatment of the lignin with boiling 5% H_2SO_4 for 5 hrs. caused a decrease in wt. of 5% and increase of the amt. of MeO groups to 16.3%. The reducing sugar in an aq. ext. after the hot water treatment and in the hydrolyzate after the H_2SO_4 treatment was 6.8% of the crude lignin. In addn., the analysis of a crude lignin, after pptg. from dioxane, disclosed 16% of pentosans. The compn. of crude lignin was not changed after extg. it from dioxane with ether, but 6% (by wt. of the pulp) of lignin was not extractable from dioxane with ether. The pulp residue undissolved in the dioxane soln. contained lignin 12.2, pentosans 5.3, MeO groups 2.4% (by wt. of pulp). The authors believe that lignin exist in the fir pulp as a specific substance which is extracted with dioxane under mild conditions in an uncondensed form which is very similar to the natural lignin. Five references.

A. A. Podgorny

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Relation of lignin to hemicelluloses II. N. I. Nikitin, M. Avidon and I. M. Orlova. *J. Applied Chem.* (U. S. S. R.) 9, 2216-20(in German 2221) (1936). See C. A. 31, 1200F. A. A. Podgorny

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B-2-5

Bleaching of viscose pulp in the Syuski combine. N. I. Nikitin, F. Komarov, and I. A. Nagrodski (*Bumashn. Prom.*, 1936, 15, No. 4, 33—41).—In the 2-stage process, the best results were obtained with tower-bleaching at 17—20°, using 18—20% aq. $Ca(OCl)_2$. Viscose pulp of satisfactory chemical and physical properties was obtained from pulp with a 200—500 millipoises (1·7—2·2% of lignin). The concn. of bleaching liquid should be determined by titration and not by measurement of *d*. Ch. Abs. (e)

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Achievements of wood chemistry N I Nikitin
J. Applied Chem. (U. S. S R) 10, 1905 37(1937) A
review with 190 references A A Podgorny

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The action of chloroacetic acid on Willstätter lignin and on wood pulp. N. I. Nikitin and T. I. Rudneva. *Applied Chem.* (U.S.S.R.) 10, 1015-20 (in French 1020-1037). $ClCH_2CO_2H$ reacts with Willstätter lignin at 100-20° with almost complete solution of lignin, and production of an ester contg. Cl 9, MeO 13%. The direct action of $ClCH_2CO_2H$ on pine pulp under the same conditions results in solution of not less than ⅓ of the esterified lignin together with a part of the carbohydrates. After extg. the product with ether, removal of adsorbed $ClCH_2CO_2H$ with an alcoholic NH_3, and removal of the carbohydrate admixts. by means of acid hydrolysis (used 5% H_2SO_4), the compn. of the regenerated lignin is similar to that of Willstätter lignin. The pptd. ester is easily saponified with weak alkali and with H_2SO_4. The treatment of ester with alc. NH_3 yields $ClCH_2CONH_2$. The comparison of the elementary compn., and the Cl and MeO contents, with those theoretically calcd. by the Freudenberg lignin formula discloses that ⅔ of the OH groups were esterified. Four references. A. A. P.

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CA

The chemical composition of pine needles and processes of the production of needle fibers. I. M. Ochova and N. I. Nikitin. *Lesokhim. Prom.* 2, No. 9, 31-6(1939). *Chem. Zentr.* **1940**, I, 1123-4. Pine needles contain up to 3.5% ash, ether, alc. and H_2O ext. 12.5, 28 and 20%, resp. The H_2O-insol. fraction contains 2.5-6.5% reducing substances and 4.5-5% tannins. For the production of needle fibers the needles are crushed, steam distd. to remove volatile oils, treated with Cl, filtered and washed with hot 3% Na_2SO_4 and H_2O. By treatment of the needles with a soln. contg. 4% SO_2 and 1% CaO (preheating for 2 hrs., cooking for 4 hrs. at 140-145°) a 35% yield of fiber is obtained. This may be used as filling or for *papermaking*. The fibers obtained by the second process are of better quality than "light," obtained by simple crushing of the needles after removal of volatile oils.

H. R. Wirth

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Low-temperature mercerization of cotton cellulose T. I. Rudneva and N. I. Nikitin. *Org. Chem. Ind.* (U. S. S. R.) 6, 398-400(1939).—Swelling of cotton fibers, with consequent increase in their reactivity, is enhanced by freezing the suspension of cotton in aq. NaOH. The greatest effect is obtained in 8% NaOH at −15°.

B. C. P. A.

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Investigation of lignin by alkaline fusion. F. I. Rudneva and N. I. Nikitin. *J. Applied Chem.* (U. S. S. R.) 12, 72-5 (in French, 75)(1939). - The lignin was prepd. by the Willstater method) from larch sawdust previously treated with an alc.-C_6H_6 (1:1) mixt. and with hot water, yielding 2.52 and 21.97% of substances sol. in the resp. solvents. The lignin had C 64.74, H 5.27, MeO 15.20 and ash 0.79%. The fusion with KOH was carried out by the Freudenberg method (cf. *C. A.* 30, 6192[1]), with subsequent methylation of the resulting phenol groups with Me_2SO_4 at 60° and then, with CH_2N_2, and oxidation with $KMnO_4$, yielding 11.3% of veratric acid (based on oxidized lignin) part of which was obtained directly after methylation. The analysis of the mother liquor after crystg. the veratric acid showed the presence of veratroylformic acid. Conclusions. The larch lignin contained the pyrocatechol group.

A. A. Podgorny

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Lignin and methylated carbohydrates extracted from fir with dioxane III I. M. Orlova and N. I. Nikitin. *J. Applied Chem.* (U. S. S. R.) 12, 76-84 (in French, 84) (1939); cf. Nikitin, *et al.* C. A. 31, 4651[7], 4652[1]. The crude lignin, ppt'd. with ether from the dioxane soln., consisted of water-insol. 63-83 and water-sol. substances 37-17%. The insol. substances were treated by the Freudenberg method (cf. C. A. 30, 6192[2]), yielding 9.4-12.2% (by wt. of oxidized lignin) veratric acid and apparently other aromatic acids. Part of the veratric acid was decompd. during the prepn. The insol. portion of "dioxane-lignin" bad ultraviolet absorption spectra similar to those of the usual prepns. of lignin (cf. Herzog and Hillmer, C. A. 26, 3485) and also to those of isoeugenol, disclosing its aromatic structure. The sol. portion consisted of substances similar to carbohydrates, having the compn. C 44.74, H 6.41, OH 22.5, MeO [illegible], reducing substances (after hydrolysis) 72 and methylated carbohydrates 2.4%. The amt. of the last substances actually should be much larger. The sol. portion treated by the usual method yielded 16.5-62.3% of "tannin-like substances," disclosing that the conditions of prepn. of the crude "dioxane-lignin" affected not only the yield of the water-sol. portion but also its compn. However, the reaction for tannin substances with gelatin and for the pyrocatechol group with HCHO was neg. Therefore, the nature of the "tannin-like substances" is unknown.

A. A. Dubinovy

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CA

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Cellulose phthalates. N. I. Nikitin and I. I. Kor-chemkin. *Bull. acad. sci. U. R. S. S., Classe sci. chim.* 1940, 245-56 (in German, 257); cf. C. A. 35, 3436[8]. Since the formation of cellulose (I) phthalates from phthalic acid anhydride (II) and untreated I in pyridine (III) proceeds very slowly and requires prolonged heating which leads to considerable decompn. of the esters formed, various methods have been used in the pretreatment of I before esterification, to increase its activity. Most gratifying results are obtained when I is activated by swelling in water followed by removal of the solvent by means of III without intermediate drying. Esters are also easily formed when hydrated I obtained by mercerization and I pptd. from Schweizer's reagent are used. The phthalates which are sol. in III decomp. at 100-105° with the formation of II. The Cu salt of I phthalate is obtained by adding a small excess of $CuSO_4$ soln. to the Na salt of the ester in aq. acetone. It is dried at 100-5° since it is stable at that temp. Sapon. and titration of the CO_2H group in the phthalate and detn. of Cu in the salt give results which are in good agreement as regards the rate of esterification, it being about 1:2:2.0 of the HO groups based on $C_6H_{10}O_5$. The effect of the ratio II:I, temp. and duration of the reaction upon phthalization has been studied. A decrease in the temp. to 70-5° (instead of 105°), as well as a change in the above ratio from 20:1 to 5:1, causes a decrease of the reaction rate. When the duration of the reaction is increased from 4 to 8 hrs., the rate of esterification is somewhat increased. A 4-5% soln. of phthalate (esterification rate 1:[illegible]) in alc.-acetone (2:1) or alc. and benzene (1:1) after centrifuging gives a transparent film which, however, is rather easily torn. The reasons for the solv. of the phthalates obtained by means of II in III and the insolv. of esters obtained by esterifying I with phthalyl dichloride are discussed; it is assumed that the mol. structure is responsible for the different behavior. The above method used for the prepn. of I phthalates has been successfully employed also in the prepn. of other phthalates such as those of starch. Gertrude Berend

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Ca

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The role of preliminary swelling of cellulose in the preparation of its phthalic esters N. I. Nikitin and F. I. Korchemkin. *J. Applied Chem.* (U. S. S. R.) 13, [illegible] in French, 750 (1940). A preliminary mercerization of cellulose with NaOH and consecutive washing with H_2O and then with pyridine accelerated the esterification process. Thus, the esterification with phthalic anhydride (I) was complete in 4-5 hrs. at 105-10° yielding a product having 1.5-2 hydroxyl groups substituted with phthalate radical (based on $C_6H_{10}O_5$). The esterification of cellulose ppt'd from Schweitzer soln. proceeded still more rapidly. The acidic cellulose phthalates were not stable at 100-10° and gradually formed I, but their Cu salts were stable at that temp. The insoly. of esters obtained with phthalyl chloride is explained by the formation of 3-dimensional mols.

A. A. Podgorny

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1-II-5

[illegible] N. I. Nikitin and T. I. [illegible] Compt. rend. Acad. Sci. U.R.S.S., [illegible] [illegible].—The [illegible] conditions for producing sol. [illegible] from [illegible] and sulphite viscose cellulose are described. Analysis of the products indicated that [illegible] $C_6H_{10}O_5$ groups were associated with each CS_2Na group.

J. L. D.

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OPEN

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

CA

23

Advances in Soviet forest chemistry in the last thirty years. N. I. Nikitin. *Zhur. Priklad. Khim.* (J. Applied Chem.) **20**, 1083-96(1947). Review with 64 Russian references. N. Thon

COMMON ELEMENTS

MATERIALS INDEX

OPEN

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

Low substituted fibrous products of the alkylation of cellulose. N. I. Nikitin, A. M. Plekhanova, and I. I. Rudnova. *J. Applied Chem.* (U.S.S.R.) 20, 1185-90 (1947). Linters or bleached wood pulp were swollen with 3 times their wt. of 17.5% NaOH and kept in a closed vessel at 50° for 22 hrs. with MeI (I). As the percentage of I (based on the wt. of cotton) was varied from 11.5 to 15.0%, the MeO content increased from 1.11 to 1.15% and the soly. in 4% NaOH, both before and after freezing, increased. All the products swelled only slightly in H_2O, except the most highly substituted, which swelled considerably. Similar results were obtained with bleached wood pulp. Alkylation of linters with EtBr at 50-60° was considerably less efficient than with I. In alkylating linters with $PhCH_2Cl$ (II) 25% NaOH, 22 hrs. (6-7.5%) about 1.5%, II is needed for sufficient substitution to insure dispersibility in aq. NaOH. Slight pretreatment of mercerized cellulose with I facilitates alkylation with II and gives more easily dispersible products. Quant. data show that the hydrolysis of cellulose (as measured by reducing-sugar values) increases in rate with increasing alkylation, at the end of 14 hrs. (10 g. I and refluxing in 5% H_2SO_4) the percentage of glucose is 6.2-[illegible] of 14.4% for cotton [illegible] and 1.8% MeO resp. The equil. moisture content at 1 relative humidity for cotton [illegible] and 1.6% MeO are only slightly higher than for mercerized cotton.

I. P. Danchy

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

Recent advances in wood and cellulose chemistry N
I. Nikitin *Bumazn Prom* 22, No 1, 6-13(1947)
A review with 17 references Marshall Sittig

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N.I.

Physicochemical properties of mercerized and weakly alkylated cellulose. N. I. Nikitin and N. I. Klenkova (V. M. Molotov Technol. Inst., Leningrad). *Issledovaniya v Oblasti Vysokomolekul. Soedinenii, Doklady 6-oi Konf. Vysokomolekul. Soedinenii, Akad. Nauk. S.S.S.R.* 1949, 138-45.—In a study of the effect of alk. treatment, especially at low temp., on hygroscopicity, hydrolyzability, and av. mol. wt. of cellulose it was shown that the greatest solvent properties were possessed by 10-12% NaOH solns. at −8° to −10° (without freezing) which produced the greatest swelling of cellulose; the yields of mercerized cellulose reached 84-9%, and the hydrolyzability and hygroscopicity of these products were the highest. As previously known, the alk. treatment reduced the av. mol. wt. Actual freezing of the mixts. led to further degradation of cellulose with increase of soly. and decrease of mol. wt.; this was particularly noticeable in 8% NaOH. The product on recovery from the alk. soln. had an av. degree of polymerization of 310. In oakwood the freezing sequence in 4% NaOH gave only a 3% increase in extractable hemicellulose, indicating a lesser effect on the wood structure than on loose cellulose matter. Repeated freezing of cellulose in H_2O led to gradual drop in av. mol. wt. Light alkylation of the mercerized material with MeI (until 1.9-12.4% MeO is reached) led to a further increase in hygroscopicity owing to further opening-up of the mech. structure of cellulose. Low degree of alkylation also increased susceptibility to hydrolysis, as did a similar introduction of 2-hydroxyethyl groups by treatment of mercerized cellulose with ethylene oxide at 20°. Treatment of such products with hot 5% H_2SO_4 resulted in the isolation of up to 70% reducing sugars. G. M. Kosolapoff

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CA

Chemical composition of wood pulp of oak according to types. N. I. Nikitin, T. I. Rudneva, A. F. Zaitseva, and M. M. Chochieva. *Zhur. Prikład. Khim.* (J. Applied Chem.) **22**, 67-78(1940).—Samples of various oak trees from different locations in the U.S.S.R. did not show large differences in compn.; variations of 1-2% within a species and of 5-6% within the type of component sought were found. The largest variation (2-6%) was found in the tannins taken either from the center (high level) or periphery of the tree. G. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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NIKITIN, N.I.

PHASE I TREASURE ISLAND BIBLIOGRAPHIC REPORT AID 166 - I

BOOK Call No.: TA419.N55

Author: NIKITIN, N. I.
Full Title: WOOD CHEMISTRY
Transliterated Title: Khimiya drevesiny

Publishing Data
Originating Agency: Academy of Sciences of the USSR. Forestry Institute
Publishing House: Academy of Sciences of the U.S.S.R.
Date: 1951 No. pp.: 578 No. of copies: 4,000
Editorial Staff
Editor: Golovnin, M. I. Tech. Ed.: None
Editor-in-Chief: Danilov, S. N., Corresponding Member, Academy of Sciences, U.S.S.R and Sukachev, V. N., Academician. Appraiser: None
Others: Several Soviet scientists are named as contributors.

Text Data
Coverage: The book represents a compilation of Russian and non-Russian scientific materials on the chemistry of wood, published up to 1950. A description is given of cellulose derivatives, lignin, hemicelluloses, and polyuronides. The manufacture of sulfite and sulfate celluloses, destructive distillation and hydrolysis of wood are also covered.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

Khimiya drevesiny AID 166 - I

The book is well written, contains many Soviet references and might be of interest to those specialising in the chemistry of wood.

Purpose: The purpose of this edition was to assemble recent significant scientific data published on the chemistry of wood.

Facilities: Names of many Soviet scientists are mentioned.

No. of Russian and Slavic References: Many references are cited in the footnotes (1920-1950).

Available: Library of Congress.

2/2

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28

Effect of low degree of alkylation on the properties of cellulose fiber N. I. Nikitin and N. I. Klenkova (V. M. Molotov Technol. Inst., Leningrad) *Zhur. Prikkl. Khim.* (J. Applied Chem.) 24, 296-307(1951). Introduction of up to 11-12% of alkyl groups (Me, Et, HOCH$_2$CH$_2$) into cellulose causes rupture of H bonds in the cross links and increases hygroscopicity and hydrolyzability of the end groups and opens up the internal structure of the fiber. The effect increases up to a certain degree of alkylation. 7-8% alkyl groups cause an 800% increase in hydrolyzability (5% H_2SO_4). Hydroxyethylcellulose shows max. hydrolyzability at 10-11% alkylation. The degree of hygroscopicity increase depends on the nature of the alkyl groups and their hydrophilic properties. The degree of polymerization of the cellulose proper does not appear to affect the hygroscopicity or hydrolyzability.

G. M. Kosolapoff

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23

CA

The aqueous hydrolysis of oakwood. A. F. Zaitseva and N. I. Nikitin. *J. Applied Chem. U.S.S.R.* 24, 427-38 (1951)(Engl. translation)(Russian Ed. 24 392-403).—Upon prolonged pretreatment of oakwood (*Quercetum fontisuale*) sawdust with boiling water at 100°, the amts. of water-sol. substances obtained were: 32.0% after 500 hrs. and 65.6% after 1000 hrs.; heartwood chips gave 49.4%, and sapwood chips 52.1% after 600 hrs. It was found that the various substances in wood dissolved at different rates during mild aq. hydrolysis. Thus pentosans and uronic acids dissolved fastest, lignin somewhat slower, and cellulose much slower. The data indicated that lignin exists in wood as a substance possessing its own properties and contg. a much higher percentage of C (64-66%) than the carbohydrates. The wood carbohydrates largely enter the aq. soln. in polymer form. Xylose was found to be the predominating sugar in the hydrolyzates. Anatomical investigation and microchem. reactions of cross sections have shown that the prolonged extn. with water involves intensive leaching of the wood constituents, not only in the surface layers of the cells but also in their internal portions. Measurements of the libriform cells have shown that its walls were 72% thinner after 1000 hrs. of aq. extn. than the walls of the libriform cells that had not been extd. with water.

T. R. Zegree

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N. I.

Vinylation of cellulose. V. V. Shtitevskii, N. A. Obolonskaya, and N. I. Nikitin. Zhur. Priklad. Khim. (J. Applied Chem.) 24,1045-51(1951).-Vinylation of purified sulfite cellulose (1% lignin and 5.1% H_2O) with C_2H_2 with 20-40% KOH hrs. at 130-75° gave predominantly a fibrous product as well as a resinous alkali-sol. material. The latter after purification through Et_2O extn. failed to show any loss of AcH upon acid hydrolysis, whereas the fibrous products gave less than the expected amts. The fibrous product corresponds by analysis to 0.15-substitution, i. e., addn. of 1 mol. C_2H_2 per 2 glucose units, and was obtained under the milder conditions (above) as well as under the more drastic ones. The most drastic conditions (40% KOH, 33 Hrs.' reaction) gave a product which, on treatment with H_2O sepd. into floating and sinking fractions. The former corresponds to the above formula; the latter was a product of addn. of 3 mols. C_2H_2 per 2 glucose units. Apparently the products are not vinyl ethers but further reaction products of them, such as acetals of ethylidene derivs. of cross-chain type. G.M.F.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

TOVETAYEV, I. P., [illegible] M. K., NIKITIN N. I.

Larch

Chemical composition of the wood of the Daurian larch. Zhur. prikl. khim. 2[illegible] No. 2, 195[illegible].

9. Monthly List of Russian Accessions, Library of Congress, August 1952. Unclassified.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N.I.

Nikitin, N.I.	"[illegible] of Lignin"	Institute of Forestry, Academy of Sciences USSR

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N.I.

ARBUZOV, A.Ye., akademik; KAZANSKIY, B.A., akademik; PETROV, A.D., chlen-korrespondent AN SSSR; NIKITIN, N.I., chlen-korrespondent AN SSSR; FIGUROVSKIY, N.A., professor, otvetstvennyy redaktor; POGODIN, S.A., professor; ZVYAGINTSEV, O.Ye., professor; YEVTEIEVA, P.M., uchenyy sekretar'.

[Materials on the history of Soviet chemistry; reports given at the 2nd All-Union Conference on the History of Soviet Chemistry, 21-26 April 1951] Materialy po istorii otechestvennoi khimii; sbornik dokladov na vtorom Vsesoiuznom soveshchanii po istorii otechestvennoi khimii, 21-26 aprelia 1951 g. Moskva, Izd-vo Akademii nauk SSSR, 1953. 318 p. (MLRA 7:4)
(Chemistry--History)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N.I., chlen-korrespondent.

Wood chemistry. Nauka i zhizn' 20 no.5:22-24 My '53. (MLRA 6:6)

1. Akademiya nauk SSSR. (Wood-using industries)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N.I., otvetstvennyy redaktor; FIGUROVSKIY, N.A., doktor khimicheskikh nauk, redaktor; BARZAKOVSKIY, V.P., doktor khimicheskikh nauk, redaktor.

[Materials on the history of Russian chemistry; reports made at meetings of the Leningrad branch of the Commission on the History of Chemistry] Materialy po istorii otechestvennoi khimii, doklady, zaslushannye na zasedaniiakh leningradskogo filiala Komissii istorii khimii. Moskva, Izd-vo Akad. nauk SSSR, 1954. 122 p. (MLRA 8:1)

1. Chlen-korrespondent Akademii nauk SSSR. 2. Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk.
(Chemistry--History)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N. I.

3

The amount of unfreezing water in cellulose fibers after swelling. N. I. Klenkova and N. I. Nikitin. *Zhur. Prikl. Khim.* 27, 171-81(1954) —The detn. of unfreezing H_2O in cellulose fibers was made by the calorimetric method (cf. Weissberger, *Physical Methods of Org. Chem.*, 1945 (*C.A.* 39, 2513f)). Fibers that had been swelled by immersion in H_2O retain larger amts. of unfreezing H_2O (at −5°) than do the fibers that had been swelled by exposure to H_2O vapor at 100% relative humidity. Both natural and regenerated fibers display this behavior. Thus swelling in the liquid H_2O leads to greater disorientation of the internal coating of the fiber. While fibers that had not been dried after various chem. treatments (with Cl or with NaOH) retain large amts. of unfreezing H_2O, considerably smaller amts. are held by the same fibers that had been dried after the chem. treatment. Drying appears to draw together the cellulose chains with closures by intermol. bonds, and the subsequent swelling cannot immediately return the fiber to the earlier state. The results indicate that the cellulose structure should be regarded as quite mobile and plastic.

Generally the hydrolyzability (by hot 5% H_2SO_4) of the fiber rises with increase of the retained H_2O content.

G. M. Kosolapoff

MF 11-10-54

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N.I.

Chemical composition of holocellulose and hemicelluloses of oak wood and of some Far-Eastern coniferous species. A. P. Zaltseva and N. I. Nikitin. *Zhur. Prikład. Khim.* 27, 965-74(1954).—Examn. of the methods of prepn. of holocellulose by means of Cl and $H_2NCH_2CH_2OH$ and $NaClO_2$ show that the most convenient procedure is the latter, but both methods give comparably reproducible results (cf. Wise, *et al.*, *C.A.* 40, 1312[8]). Oak, spruce, and fir give 66-71% holocellulose contg. under 0.1% lignin. Alk. extn. of holocellulose gives 38% α-cellulose from angiosperms and 51% from conifers. Most hemicellulose is contained in the 1st fractions from treatment of homocellulose with 4, 11, 17, and 24% NaOH under N. Oak hydrolyzates contain no mannose but yield glucoronic acid. Oak yields about 18% hemicelluloses, conifers some 18%, as a result of such an alk. extn. G. M. Kosolapoff

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N.I.

NIKITIN, N.I.; CHOCHIYEVA, M.M.

Effect of diluted alkali on lignin. Bum.prom.29 no.5:6-8 My '54. (MLRA 7:7)

1. Chlen-korrespondent Akademii nauk SSSR (for Nikitin) 2. Institut lesa Akademii nauk SSSR.
(Wood--Chemistry)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN,N.I.; POGODIN,S.A., professor, redaktor; GOLOVNIN,M.I., redaktor; SMIRNOVA,A.V., tekhnicheskiy redaktor

[Career of a chemist; sketches of the past] Na puti nauchnogo rabotnika-khimika; ocherki iz proshlogo. Moskva, Izd-vo Akademii nauk SSSR, 1955. 106 p. (MLRA 9:2)

1. Chlen-korrespondent AN SSSR (for Nikitin)
(Chemists)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

Nikitin, N. I.

USSR/Chemical Technology. Chemical Products and Their Application--Wood chemistry products. Cellulose and its manufacture. Paper.

Abs Jour: Ref Zhur-Khimiya, No [illegible], [illegible], 1[illegible]

Author : Nikitin, N. I.
Inst : Institute for Forestry Problems of the Academy of Sciences Latvian SSR.
Title : Methods for the Activation of the Chemical Reactions of Cellulose.

Orig Pub: Tr. In-ta Lesokhoz. problem AN Latvii, 19[illegible], Vol [illegible], [illegible]

Abstract: No abstract.

Card 1/1

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

AID P - 2779

Subject : USSR/Chemistry

Card 1/1 Pub. 152 - 7/19

Authors : Lyubimova, Ye. N. and N. I. Nikitin

Title : Use of activated cellulose in the synthesis of methyl and ethyl ethers of low degree of substitution

Periodical : Zhur. prikl. khim. 28, 4, 402-406, 1955

Abstract : Methylation and ethylation of pretreated cellulose is described. Methyl and ethyl iodides, ethyl chloride and dimethyl sulfate were used in the etherification. The solubility of ethyl cellulose containing 2% OC_2H_5(in 6% NaOH at 20°C) was 94%. Five tables, 9 references (2 Russian: 1941-1951).

Institution : Laboratory of Chemistry of Wood and Cellulose of the Wood Technical Academy im. S. M. Kirov.

Submitted : My 3, 1954

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N. I.

USSR

Kraft pulp from Daursk larch. A. F. Zaitseva, I. P. Fedorchenkova, S. D. Antonovskii, and N. I. Nikitin. *Bumazh. Prom.* 30, No. 2, 9-12(1955). [redacted] kraft cooks were made on Daursk larch from Sakhalin and the Yakutsk region. At 20.6% active alkali, 26.5% sulfidity, a wood to liquor ratio of 1:6, 3 hrs. and 1 hr. at 173°, the percentage yields (total ?) were 43.1, 43.3, 39.7, and 34.0; percentage screenings 2.7, 2.8, 2.8, and 2.9; Björkman no. 146, 152, 154, and 156; percentage pentosans in pulp 6.1, 6.5, 6.8, and 7.6; and percentage lignin in pulp 7.5, 8.1, 8.2, and 9.2 for wood contg. 13.2, 15.5, 16.2, and 22.6% H_2O exts., resp. At 20% active alkali, 25% sulfidity, 3 hrs. to and 1-2 hrs. at 173°, the av. yield was 44%, Björkman no. 146, breaking length 10,700, double folds 4800, and stretch 4%. A bleachable kraft (36-9% yield, 84-105 Björkman no., 3-5% pentosans, 3-4% lignin, 10,000 m. breaking length, and up to 6800 double folds) could be obtained by extending the cooking time 1 hr. and increasing the active alkali to 26-9%. Preliminary extn. of the wood with H_2O gave a pulp with lower Björkman no. and decreased pentosan and lignin content. John Lake Keays

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N.I.

Properties of solutions of low-substituted xanthates. N. I. Nikitin and E. A. Abramova. *Zhur. Priklad. Khim.* [illegible] (1956); cf. *C.A.* 43, 2426g.—Continuous stirring must be used in order to prep. uniform solns. of low-substituted xanthates at freezing temps. (cf. *C.A.* 35, 2321[6]); uniformity is estd. by the rate of filtration through a sieve. Filterable solns. were obtained with 15% CS_2 at temps. slightly above freezing. With 5–6% CS_2 (based on α-cellulose) stable solns. were obtained. These were more readily hydrolyzed and reduced than those obtained with 12–13.5% CS_2. The viscosity at 20° of 7 and 7.5% solns. plotted vs. aging time (stored at 17–18°) passed through a min. Solns. of high stability were obtained even after short periods of aging. The degree of polymerization of xanthate solns. before and after freezing did not change; apparently the cellulose bonds did not rupture during freezing. I. B.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N. I.

Preparation and characteristics of low-substituted methyl- and carboxymethyl-cellulose. N. I. Nikitin and G. A. Petropavlovskii (Zh. prikl. Khim., 1956, 29, 1540—1549).—Low-substituted simple and complex esters give increased reactivity and show high hydrophilic characteristics when small quantities of substituted radicals are introduced into the cellulose. The prep. and characteristics are described of low-substituted methyl- and carboxymethyl-cellulose isolated from linters by a freezing technique. The cellulose dissolves in 4—6% aq NaOH with low degree of substitution (9—10 for methyl- and 2 for carboxymethyl-cellulose). For satisfactory dissolution in alkali, prolonged swelling at low temp. before freezing is suggested. Fractionation in water of the differently-substituted methylated fibre products showed that in all cases they contained 29—31% ·OMe. Freezing led to an increase in water-sol. particles but not to any variation in the ·OMe content. A lower polymerization value increases the amount of sol. fractions but the latter also contain 29—31% of ·OMe groups. A. L. B.

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4E2c(j)
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NIKITIN, N. I.

3

Characteristics of solutions of low-substituted methylcellulose. [illegible]

[illegible] 1767–17[illegible] Weak [illegible]

substituted methylcellulose (I) exhibited stability with very little reduction of viscosity over a period of time; the mol. wt. of I (degree of polymerization 1200–1400) tended to be lowered by dissolving in 6·5 mol.-% caustic alkali during the freezing process, but with polymers of lower mol. wt. this does not occur, there being a higher degree of elasticity but low polymerizability. Examination of 1–2% alkaline solutions of I indicates instability in the latter; the viscosity can vary with time and gradually decreases even when isolated from the effect of CO_2; the structure is also degraded. All alkaline solutions of methylcellulose increase their viscosity and quickly coagulate [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] in 4·5 mol.-% NaOH coagulates on heating and [illegible] decrease of viscosity but [illegible] prep. of films [illegible] solutions of I [illegible]

are briefly discussed; the films have a satisfactory mechanical strength (8–11 kg./mm.²); the water-absorbing quality of the film

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Note the water-absorption index of the films is near to that of Cellophane. A.L.B.

NIKITIN, N. Y., And PETROPAVLOVSKIY, G. A.

"Properties of cellulose ether solutions," a paper presented at the 5th Congress on the Chemistry and Physics of High Polymers, [illegible], Moscow, Forest Research Inst.

B-3,084,395

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

SUKACHEV, V.N., akademik; NIKITIN, N.I.; VASIL'YEV, P.V., prof., doktor ekon. nauk; YURKN, N.A., red.; ETUSH, L.A., red. izd-va; SOKOL'SKAYA, Zh.M., BRATISHKO, L.V., tekhn. red.

[Progress of science in Soviet forestry during the past 40 years] Dostizheniia nauki v lesnom khoziaistve SSSR za 40 let. Moskva, Goslesbumizdat, 1957. 352 p. (MIRA 11:7)

1. Akademiya nauk SSSR. Institut lesa. 2. Chlen-korrespondent Akademii nauk SSSR (for Nikitin).
(Forests and forestry)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

CHUDAKOV, M.I., kand.khim.nauk; NIKITIN, N.I.; SUKHANOVSKIY, S.I., kand.tekhn.nauk

Modern ideas on the chemistry and structure of lignin. Khim.nauka i prom. 2 no.4:408-415 '57. (MIRA 10:11)

1. Chlen-korrespondent AN SSSR (for Nikitin).
(Lignin)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

ZAYTSEVA, A.F.; FEDORISHCHEVA, I.P.; NIKITIN, N.I.

Extraction and utilization of water-soluble substances of Dahurian larch by the hydrolysis method. Gidroliz. i lesokhim. prom. 10 no.2:3-6 '57. (MLRA 10:5)

1. Institut lesa AN SSSR i Leningradskaya lesotekhn.cheskaya akademiya.
(Larch) (Hydrolysis)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, A. I.

Automatic weft straightening on tenter frames. Tekst.prom. 17 no.6:57-58 Je '57. (MIRA 10:7)
(Textile finishing) (Automatic control)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

[redacted], N.I.; SIMONOVA, L.K.

Nikolai Pavlovich Fedot'ev; on his 60th birthday. Zhur.prikl.khim. 30 no.3:337-338 Mr '57. (MLRA 10:5)
(Fedot'ev, Nikolai Pavlovich, 1897--)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

Preparation of synthetic resins from lignin and acetylene in the presence of [illegible] and M. A. Mikhailovsky, Zhur. Prikl. Khim. 30, 725-[illegible] (1957).—Lignin (I) of kraft black liquor contg. 5% NaOH and dry lignin (II) optd. with CO_2 (cf. Plungolan, C.A. 34, 8263[1]) and dissolved in 5% NaOH were treated with C_2H_2 (III) in a revolving autoclave at an initial pressure of 1[illegible] atm. With I at 170° the [illegible] 3-4 hrs. and [illegible] The yield of [illegible] resin was 100%, based on the original lignin and the consumption of III was 3-4 times [illegible]

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N.I.; IVANOV, V.A.; MONINA, K.Z.

Determining the evaporative capacity of cylinders for liquified gas. Gaz. prom. 7 no.3:23-26 '62. (MIRA 1 :10)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

~~Chochiyeva~~ ~~[illegible]~~ Nikitin N.I.

CHOCHIYEVA, M.M.; NIKITIN, N.I.

Chemical properties of dioxane lignin from oak and some conifers. Zhur.prikl.khim. 30 no.12:1820-1827 D '57. (MIRA 11:1)
(Lignin) (Dioxane)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

PETROPAVLOVSKIY, G.A.; NIKITIN, N.I.

Properties of nitric acid esters of cellulose of low substitution. Zhur.prikl.khim. 31 no.12:1862-1869 D '58. (MIRA 12:2)
(Nitrocellulose)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

TSVETAYEVA, I.P.; YUR'YEVA, M.K.; NIKITIN, N.I.

Characteristics of the chemical composition of the Dahurian larch wood. Trudy Inst. lesa 45:22-30 '58. (MIRA 11:11)
(Larch) (Wood--Chemistry)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

CHOCHIYEVA, M.M.; TSVETAYEVA, I.P.; YUR'YEVA, M.K.; ZAYTSEVA, A.F.; PETROPAVLOVSKIY, G.A.; NIKITIN, N.I.

Distribution of arabogalactan in the Dahurian larch wood. Trudy Inst. lesa 45:31-49 '58. (MIRA 11:11)
(Larch) (Galactan)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

ZAYTSEVA, A.F.; NIKITIN, N.I.

Using microsections for investigating the distribution of arabogalactan in cell walls of the Dahurian larch wood. Trudy Inst. lesa 45:50-60 '58. (MIRA 11:11)

(Larch) (Galactan)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

ZAYTSEVA, A.F.; FEDORISHCHEVA, I.P.; ANTONOVSKIY, S.D.; NIKITIN, N.I.

Sulfate cellulose from the Dahurian larch wood. Trudy Inst. lesa 45:70-78 '58. (MIRA 11:11)
(Larch) (Cellulose)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

ZAYTSEVA, A.F.; FEDORISHCHEVA, L.P.; NIKITIN, N.I.

Various uses of the Dahurian larch wood. Trudy Inst. lesa 45:85-92 '58. (MIRA 11:11)

(Larch) (Wood)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

PETROPAVLOVSKIY, G.A.; NIKITIN, N.I.

Properties of low-substituent caroxylmethylcellulose from the Dahurian larch wood. Trudy Inst. lesa 45:93-102 '58. (MIRA 11:11)

(Cellulose) (Larch)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

YUR'YEVA, M.K.; NIKITIN, N.I.

Sulfite pulping of the Dahurian larch wood. Trudy Inst. lesa 45:103-135 '58. (MIRA 11:11)

(Cellulose) (Larch)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

N. Z. N. K. Fin

5(0)

AUTHOR: None Given SOV/62-59-5-36/37

TITLE: General Meetings of the Department of Chemical Sciences of the Academy of Sciences, USSR on October 23 and November 27-28, 1958 (Obshchiye sobraniya Otdeleniya khimicheskikh nauk Akademii nauk SSSR 23 oktyabrya i 27-28 noyabrya 1958 g.)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 5, pp 564-568 (USSR)

ABSTRACT: This is a report on the General Meetings of the Department of Chemical Sciences, AS USSR. On October 23, 1958 the General Meeting of the Department of Chemical Sciences of the AS USSR took place under the chairmanship of Academician N. N. Semenov. A. V. Novoselova delivered a lecture on the "Investigations in the Field of Tellurium Chemistry". She emphasized the fact that the interest in tellurium has considerably increased in the course of the last years because of the valuable semiconductor properties of tellurium and numerous tellurides. In her lecture Novoselova reported on the production of pure tellurium, on the investigations of the behavior of admixtures and on investigations of numerous tellurides. The lecturer was asked numerous questions. M. A. Poray-Koshits, Candidate of Physical and Mathematical Sciences spoke on the "Stereochemistry of Complex Compounds of Bivalent Nickel". On the basis of direct X-ray structural analyses carried out at the Institut obshchey i neorganicheskoy khimii AS SSSR (Institute of General and Inorganic Chemistry, AS USSR) and the MGU it was found that all ammonia thiocyanate compounds of nickel which are separated from the solution at different concentrations represent, according to their structural character, complex six-coordination compounds. The analysis of the crystalline structures makes it possible to set up common crystallochemical rules in the series of ammonia thiocyanate compounds. G. B. Bokiy and S. Z. Roginskiy, Corresponding Members, AS USSR, took part in the discussion. M. J. Zonikhberg, Doctor of Chemical Sciences spoke on the "Application of High Pressure in the Investigation of the Transition Stage and the Mechanism of Reaction". By means of experimental data the lecturer proved that the application of high pressure opens new prospects in this field. S. Z. Roginskiy B. V. Deryagin, Corresponding Members, AS USSR, M. .. Temkin and A. I. Kitaygorodskiy, Doctors of Chemical Sciences took part in the discussion. On the occasion of the general meeting held under the chairmanship of Academician A. P. Vinogradov from November 27 to 28, 1958 N. I. Nikitin, Corresponding Member, AS USSR and G. A. Petropavlovskiy, Candidate of Technical Sciences spoke on the "Properties of Low-substituted Cellulose Nitrates and Their Solutions". The following scientists took part in the discussion: S. N. Danilov, Corresponding Member, O. P. Golova, Doctor of Chemical Sciences, et al. G. V. Samsonov, Doctor of Chemical Sciences spoke on the "Specific Sorption of Ions of Organic Substances". The synthesis of weakly swelling ion-exchange resins, which cannot absorb certain ions of organic substances allow the establishment of a new effective method of producing chemically pure streptomycin and penicillin. The lecturer was asked many questions. M. V. Vol'kenshteyn, Doctor of Physical and Mathematical Sciences dealt with the "Problems of Statistical Physics of the Polymer Chains". The lecturer and his collaborators have developed a general statistical method of computing the properties of macromolecules which is based on the application of the rotational isomer model. The following scientists took part in the discussions: V. I. Ivanov, Doctor of Chemical Sciences B. V. Deryagin and V. G. Levich, Corresponding Members, AS USSR. V. N. Tsvetkov, Doctor of Physical and Mathematical Sciences spoke on the "Intermolecular Interaction and the Form of Macromolecules in Solutions". The lecturer demonstrated that the molecular weight of the fraction may be determined by a joint determination of the characteristic viscosity and diffusion. B. V. Deryagin, Corresponding Member, AS USSR, M. V. Vol'kenshteyn, Doctor of Physical and Mathematical Sciences and A. I. Kitaygorodskiy, Doctor of Chemical Sciences took part in the discussion.

Card 1/4

Card 2/4

Card 3/4

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

Low-Substituted Cellulose Ethers and [illegible] 2
Prospects of Their Application SC [illegible]

[illegible]

[illegible] (Z PK [illegible]). [illegible] was also investigated [illegible] Kirkova and Nikitin (Z PK [illegible]). [illegible] weak [illegible] in NaOH [illegible]

[illegible]

Card [illegible]

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

Low-Substituted Cellulose Ethers and the Prospects of Their Application SOV [illegible]

solutions of this methylcellulose were coagulated with 10% ammonium sulfate, and gave films with breaking load varying from [illegible] to [illegible] kgs/mm², and with elongation of [illegible] to [illegible] %. The authors established that carboxymethylcellulose with low degree of etherification (starting with γ = [illegible], and up) was also soluble in [illegible]% NaOH solution after congealing and thawing (Trudy Inst. [illegible] AN SSSR, [illegible], Vol. [illegible], p. [illegible]; ZhPKh., [illegible], Vol. [illegible], p. 183[illegible]). Films made from this material by precipitation with 10% ammonium sulfate solution showed a very high mechanical resistance (breaking load up to [illegible] kgs/mm²). Addition of low-substituted carboxymethylcellulose fibers to paper pulp considerably increased the paper's mechanical characteristics. Low-substituted cellulose nitrate with γ = [illegible] were similarly soluble in [illegible]% NaOH solution (ZhPKh., [illegible], Vol. [illegible], p. [illegible]); the solubility decreased with increasing degree of

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[illegible]

SOV [illegible]

[illegible]

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

SMIRNOV, V.A.; NIKITIN, N.I.

Calculation of dead-end gas pipes. Gaz. prom. 4 no.11:31-34 '59. (MIRA 13:2)

(Gas distribution)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N.I.

Freezing and dissolving of cellulose and its esters in alkalies and the prospects for the application of this method. [Trudy] NTO bum.i der.prom. no.8:27-39 '59. (MIRA 16:2)

1. Chlen-korrespondent AN SSSR.
(Cellulose)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

5(2) [illegible]

[illegible]: [illegible]

[illegible]: [illegible] preparation [illegible] of dioxane-[illegible] [illegible]

[illegible]: [illegible]

[illegible]: [illegible] icellulose [illegible] dioxane-lignin. Nea[illegible] lignin [illegible] in the quantity of [illegible] round rotten oak wood by dioxane without acid cat[illegible] lignin is soluble in water to an extent of 46.[illegible] of grinding [illegible] effect on the yield if dioxane-lignin was extracted by dioxane in the presence of [illegible] acid catalyst the yield increases with the [illegible] to [illegible]. If dioxane-lignin is [illegible]

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

[illegible]

[illegible]

[illegible]

[illegible]

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

CHOCHIYEVA, M.M.; NIKITIN, N.I.

Low molecular weight dioxane lignin. Zhur. prikl. khim. 34 no.12:2733-2737 D '61. (MIRA 15:1)

(Lignin) (Dioxane)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, Nikolay Ignat'yevich. Prinimali uchastiye: ABRAMOVA. Ye.A., starshiy nauchnyy sotr., kand. khim. nauk; AKIM, E.L., inzh.-tekhnolog; ANTONOVSKIY, S.D., dots., kand. tekhn. nauk; VASIL'YEVA, G.G., inzh.-tekhnolog; ZAYTSEVA, A.F., starshiy nauchnyy sotr., kand. tekhn.nauk; KLENKOVA, N.I., kand. tekhn. nauk; MALEVSKAYA, S.S., kand. khim. nauk; NIKITIN, V.N.starshiy nauchnyy sotr., kand. fiz.-mat. nauk; OBOLENSKAYA, A.V., kand. tekhn. nauk, dotsent; PETROPAVLOVSKIY, G.A., starshiy nauchnyy sotr., kand. tekhn. nauk; PONOMAREV, A.N., kand. tekhn. nauk, dots.; SOLECHNIK, N.Ya., prof., doktor tekhn. nauk; TOKAREV, B.I., inzh.; TSVETAYEVA, I.P., kand. tekhn. nauk; CHOCHIYEVA, M.M., kand. tekhn. nauk; ELIASHBERG, M.G., doktor tekhn. nauk; YUR'YEV, V.I.; KARAPETYAN, G.O., red.izd-va; ZAMARAYEVA, R.A., tekhn. red.

[Wood chemistry and cellulose] Khimiia drevesiny i tselliulozy. Moskva, Izd-vo Akad.nauk SSSR, 1962. 711 p. (MIRA 15:2)

1. Chlen-korrespondent Akademii nauk SSSR (for Nikitin). 2. Zaveduyushchiy kafedroy fizicheskoy i kolloidnoy khimii Lesotekhnicheskoy akademii (for Yur'yev).

(Cellulose)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N.I.

Some design features worked out by the State Scientific Research and Design Institute on the Utilization of Gas in National Economy. Ispol'. gaza v nar. khoz. no.2: 163-166 '63. (MIRA 18:9)

1. Glavnyy inzh. Saratovskogo gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta po ispol'zovaniyu gaza v narodnom khozyaystve.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

PETROPAVLOVSKIY, G.A.; VASIL'YEVA, G.G.; KRUNCHAK, M.M.; NIKITIN, N.I.

Properties of films of low-substituted nitrates of wood cellulose. Zhur. prikl. khim. 36 no.8:1816-1821 Ag '63. (MIRA 16:11)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

CHOCHIYEVA, M.M.; BRESTKIN, Yu.V.; NIKITIN, N.I.

Fractional composition of sulfite pulps from broadleaf wood. Zhur. prikl. khim. 36 no.9:2055-2060 D '63. (MIRA 17:1)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

CHOCHIYEVA, M.M.; VISHNEVSKAYA, N.S.; NIKITIN, N.I.

Fractional composition of bleached broadleaf cellulose.
Zhur. prikl. khim. 36 no.10:2276-2281 O '63. (MIRA 17:1)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

MIRIN, N.I.

Grinding attachment. Mashinostroitel' no.4:24 Ap'64
(MIRA 17:7)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

CHOCHIYEVA, M.M.; VISHNEVSKAYA, N.; NIKITIN, N.I.

Fractional composition of aspen cellulose in a state nearest to the natural, and its change in the process of delignification. Zhur. prikl. khim. 37 no.6:1340-1344 Je '64.

(MIRA 18:

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

AKIM, E.L.; NIKITIN, N.I.

Production and study of low-substituted oxyethylcellulose. Trudy LTITSBP no.14:193-198 '64.

Acetylation of low-substituted oxyethylcellulose. Ibid.:199-205 (MIRA 18:8)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

MATVEYEVA, L.A.; NIKITIN, N.M.

Trip of a Soviet trade-union delegation to the Korean People's Democratic Republic. Razved.i okh.nedr 28 no.1:50-51 Ja '62. (MIRA 15:3)

1. Moskovskiy territorial'nyy komitet profsoyuza rabochikh geologorazvedochnykh rabot (for Matveyeva). 2. Tul'skaya kompleksnaya geologorazvedochnaya ekspeditsiya (for Nikitin).
(Korea, North--Mineral industries)
(Korea, North--Visitors, Russian)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

AUTHOR: Nikitin, N.M., Engineer 118-58-3-10/21

TITLE: The Mechanization of Installation Assembling in Shaft Work While Drilling (Mekhanizatsiya montazhnykh rabot pri burenii skvazhin)

PERIODICAL: Mekhanizatsiya Trudoyëmkikh i Tyazhelykh Rabot, 1958, # 3, pp 29-30 (USSR)

ABSTRACT: The article deals with the mechanization of labor consuming assembling and dismantling work while drilling test wells up to 300 m. The Mosbassuglegeologiya Trest (Trust) uses movable drilling devices of the "UKB-2-100", "SBU-150-ZIV" and "URB-Zam" types drawn by tractors. These drilling sets are used only in summer. In 1951, the trust constructed an fixed drilling set for use in winter only.

In 1954, trust innovators designed a movable drilling mechanism to be used the whole year round, in winter on sledges, in summer on wheels. The wooden body contains the drilling equipment: a drilling machine of the "ZIF-300", "KA-2M-300" or "ZIV-150" type; for hydrogeological drilling the KAM-500 type, a pump of the ZIF-200/400 type; appropriate electric motors and a bench for fitters. The weight of the drilling machine when on wheels is 8.9 tons, without wheels

Card 1/2

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118-58-3-10/21

The Mechanization of Installation Assembling in Shaft Work While Drilling

8.2 tons. At present, the Mosbassuglegeologiya Trust uses 50 movable drilling machines of this type.
There is 1 graph.

AVAILABLE: Library of Congress

Card 2/2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

132-58-7-11/13

AUTHOR: Nikitin, N.M.

TITLE: Experience in the Use of Mobile Drilling Aggregates in the Mosbassuglegeologiya Trust (Opyt ispol'zovaniya peredvizhnykh burovykh agregatov v treste Mosbassuglegeologiya)

PERIODICAL: Razvedka i okhrana nedr, 1958, Nr 7, pp 56-58 (USSR)

ABSTRACT: This article describes a mobile drilling aggregate devised in 1954 by the author and workers of the Mosbassuglegeologiya Trust, B.A. Ryb yev, V.P. Konevalov, V.V. Fedoseyev, which is being used for year-round drilling in the Moscow region. Drilling benches KA-2M-300, ZIF-300 and ZIV-150, were placed on a specially constructed platform on 4 sets of wheels combined with sledges, which allowed the transportation of the bench over all types of ground in winter and summer. Bore holes of 300 m can be drilled by these aggregates. Much time and money was saved by the general utilization of these aggregates. There are 2 diagrams

ASSOCIATION: Trest Mosbassuglegeologiya (The Mosbassuglegeologiya Trust)

1. Drilling machines--Design

Card 1/1

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N.M.

Occurrences of gypsum deposits in Tula Province. Sov.geol. 2 no.11:138-141 N '59. (MIRA 13:5)

1. Mosbassuglegeologiya.
(Tula Province--Gypsum)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N.M.

Rock salt deposits in the Moscow Basin and prospects for their utilization. Sov.geol. 4 no.11:153-158 N '61. (MIRA 14:11)

1. Tul'skaya kompleksnaya geologorazvedochnaya ekspeditsiya.
(Moscow Basin--Salt deposits)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N.M.; YASYREV, A.P.

Conditions governing the formation of gypsum in the southern wing of the Moscow Basin. Izv. AN SSSR. Ser.geol. 27 no.7:59-69 Jl '62. (MIRA 15:6)

1. Tul'skaya kompleksnaya geologorazvedochnaya ekspeditsiya.
(Moscow Basin--Gypsum)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, NIKOLAY NIKOLAYEVICH

NIKITIN, Nikolay Nikolayevich, 1897- ; FEDOROV, I.; KUMKES, S.N., redaktor; YUSHKEVICH, M.L., redaktor.

[Tientsin] Tian'tsin'. Moskva, Gos. izd-vo geogr.lit-ry, 1953. 43 p. (MLRA 7:3)
(Tientsin)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

[illegible], Nikolay Nikiforovich.

Science

Collection of arithmetical problems and exercises for third grades of primary school. Moskva, Gos. Uchebno- Pedagogicheskoe Izd-vo, 1948. Izd 4-e.

Monthly List of Russian Accessions, Library of Congress, June, 1952. [illegible].

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

MIKTEN, M.M.

Reshenie arifmeticheskikh zadach v nachal'noi shkole [Solving arithmetic problems in elementary school]. Izd. 5-e. Moskva, Uchpedgiz, 1952. 151 p.

SO: Monthly List of Russian Accessions, Vol. 6, No. 2, May 1953

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N. N.

5965 NIKITIN, N.N.: POLYAK, G.I. AN [illegible], L.N. [illegible] Dlya tret'uego Klassa nach. Shkoly. per. I. Amcha, K. Iomia. 2-Ye Izd. Sukhumi, Abgiz, 1954. 1[illegible] s. s ill. [illegible] sh. 2.000 Ekz. 95k.-Na Abkhaz Yaz.- (55-600) [illegible]11([illegible])

SO: Knizhnaya Letopis', vol. 1, 1955

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N. N.

NIKITIN, N.N. (Moscow)

Training of teachers in methods of teaching mathematics at the Methodological Institute of the Academy of Pedagogical Sciences. Mat. v shkole no.4:82-84 Jl-Ag '54. (MLRA 7:7)
(Teachers, Training of) (Mathematics--Study and teaching)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N. N.

4900. NIKITIN, N. N., POLYAK, G. B. i VOLODINA, L. N. Sbornik arifmeticheskikh zadach i uprazhneniy. Dlya pervogo klassa nach. Shkoly. Izd. 3-ye, s 10-go (RUS.) makhachkala, daguchpedgiz, 1955. 148s. s Ill. 21sm. 10.000 EKZ. 1r. 20k. V per.-- na avar. yaz.--(54-56030) 511(076)

SO: Knizhnaya Letopis', Vol. 1, 1955

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6

NIKITIN, N. N.

4903. NIKITIN, N. N., POLYAK, G. B. i VOLODINA, L. N. Sbornik arifmeticheskikh zadach i uprazhneniy. Dlya 4-go klassa nach. Shkoly. 4-ye IZD., s 10-go Rus. Nukus-Samarkand, Karakalpakgiz, 1955. 155 s. s Ill. 21sm. 3.000 EKZ. 1r. 55k. V per.--Na karakalpak. yaz.-- (54-57829) 511(076)

SO: Knizhnaya Letopis', Vol. 1, 1955

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001137010011-6"