IOFFE, I.I.; KLIMOVA, N.V.; MAKEYEV, A.G.

Liquid phase catalytic oxidation of organic compounds on noble metals. Part 3: Oxidation of ethylene glycol to glyoxal. Kin.i kat. 3 no.1:107-110 '62. (MIRA 15:3)

1. Nauchno-issledovatel'skiy institut organicheskikh produktov i krasiteley imeni K.Ye.Voroshilova.
(Ethylene glycol) (Glyoxal) (Catalysts)

DZHUVARLY, Ch.M.; ALIYEV, Z.I.; KLIMOVA, N.V.; LOGINOVA, S.I.;
MELIKOVA, T.A.; PRYANIKOV, Ye.I.; SAPONOV, V.A.

Sulfuric-acid refining of distillates of motor oil-10 separating acid oil from tar in an electrical field. Azerb. neft. khoz. 40 no.9:36-38 S '61. (MIRA 15:1)

(Lubrication and lubricants)

ALIYEV, Z. E.; DZHUVARLY, Ch. M.; KLIMOVA, N. V.; LOGINOVA, S. N.;
MELIKOVA, T. A.

Effect of electrical parameters on oil refining in a high-potential field. Trudy ENIN AN Azerb. SSR 15:46-52 '62.
(MIRA 15:10)

(Petroleum--Refining)

S/081/63/000/004/035/051
B194/B180

AUTHORS: Aliyev, Z. E., Dzhuvarly, Ch. M., Klimova, N. V., Loginova, S. N., Melikova, T. A.

TITLE: Effect of electric parameters on the refining of oil in a high voltage field

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1963, 521-522, abstract 4P162 (Tr. Energ. in-ta. AN AzerbSSR, 15, 1962, 46-52 [summary in Azerb.])

TEXT: As a result of work on the determination of the parameters of a continuous plant for the sulfuric acid refining of oil distillates in an electric fractionater it was found that the distillate oil-avtol 10, treated with sulfuric acid, can be successfully refined in the electric fields of different forms of voltage (industrial frequency, rectified and pulsed by mono- and dipole waves) at appropriate field gradients. Each type of voltage and field configuration has its own optimum gradient at which the color of the refined oil conforms with ГОСТ (GOST) standards. The time required for refining is not constant, but depends on the electrical and technological parameters of the plant. A circuit diagram is given for the experimental

Card 1/2

Effect of electric parameters on... S/081/63/000/004/035/051
B194/B180

plant. [Abstracter's note: Complete translation.]

Card 2/2

IOFFE, I.I.; KLIMOVA, N.V.

Liquid-phase oxidation of hydrocarbons on solid semiconducting catalysts. Kin.i kat. 4 no.5:779-782 S-O '63. (MIRA 16:12)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley.

KLIMOVA, N.V., starshiy nauchnyy sotrudnik

Chemistry in the cleaning of land improvement canals. Zashch. rast. ot vred. i bol. 9 no. 4:22-23 '64. (MIRA 17:5)

1. Kaliningradskaya oblastnaya opytno-meliorativnaya stantsiya.

PLYUSHCH, Boris Maksimovich; ROYTMAN, Mariya Vladimirovna; SARKISYAN, Vachagan Ovanesovich; ESIBYAN, Migran Aleksandrovich; Prinimali uchastiye: KLIMOVA, N.V.; EL'BIRT, M.D.; PARFENOV, A.N., dots., retsenzent; TARASOV, D.A., prof., retsenzent; AGADZHANOV, S.P., inzh., retsenzent

[Electrical equipment for oil and gas fields] Elektrooborudovanie neftianykh i gazovykh promyslov. Moskva, Nedra, 1965. 311 p. (MIRA 18:4)

1. Zaveduyushchiy kafedroy obshchey i spetsial'noy elektrotekhniki Groznenskogo neftyanogo instituta (for Parfenov). 2. Vsesoyuznyy zaochnyy politekhnicheskiy institut (for Tarasov). 3. Neftyanoye upravleniye Soveta narodnogo khozyaystva SSSR (for Agadzhanov).

L 27684-66 EWP(j)/EWT(m) IJP(c) RM

ACC NR: AP6005617 SOURCE CODE: UR/0233/65/000/003/0137/0143

41
B

AUTHOR: Abasov, S. A.; Bagirov, M. A.; Klimova, N. V.; Malin, V. P.

ORG: none

TITLE: Effect of electric field on dielectric and mechanical properties of polystyrene film

SOURCE: AN AzerbSSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk, no. 3, 1965, 137-143

TOPIC TAGS: polystyrene, electric field, dielectric property, mechanical property

15

ABSTRACT: The loss angle, dielectric constant, electric strength, and electric conductance of a 20-μ thick polystyrene film were measured at various temperatures and frequencies; also, mechanical properties of the film were determined. The film was aged by a 50-cps voltage of 1 to 7 kv in special cells where the film was stretched on a metal electrode, and a second metallized-glass electrode was brought in contact with or fixed at a distance (airgap) from the film. Plots are presented of tgδ measured at 1000 cps after the film had been aged at 3—7 kv for 5 hrs;

Card 1/2

KLIMOVA, N.Ya.

Fibrosarcoma of the lesser omentum. Khirurgiia Supplement:20-21 '57.
(MIRA 11:4)

1. Iz Gor'kovskogo gorodskogo onkologicheskogo dispansera.
(OMENTUM--TUMORS)

VOGRALIK, V.G., prof., red.; BELOUSOV, S.M., red.; BOL'SHEV, I.N., red.; KLIMOVA, N.Ya., red.; KOROLEV, B.A., red.; YASHANIN, Yu.V., red.

[Problems in the pathology and treatment of blood system diseases] Voprosy patologii i terapii sistemy krovi. Gor'kii, 1961. 197 p. (MIRA 14:12)

1. Gospital'naya terapevticheskaya klinika Gor'kovskogo meditsinskogo instituta im. S.M.Kirova i Gematologicheskoy kliniki pri Oblastnoy stantsii perelivaniya krovi (for Vogralik).
2. Gor'kovskaya oblastnaya stantsiya perelivaniya krovi (for Bol'shev, Klimova, Yashanin). 3. Klinika gospital'noy khirurgii Gor'kovskogo meditsinskogo instituta im. S.M.Kirova (for Korolev).
(BLOOD--DISEASES)

KLIMOVA, N.Ya.; YASHANIN, Yu.V.

Bone marrow transplantation in the clinic. Probl.gemat.i perel. krovi no.9:26-28 '61. (MIRA 14:9)

1. Iz gematologicheskogo otdeleniya Gor'kovskoy oblastnoy stantsii perelivaniya krovi.
(MARROW--TRANSPLANTATION) (AGRANULOCYTOSIS)

KLIMOVA, Nina Yaroslavna; SIMONYAN, K.S., red.

[Work experience of the Gorkiy Province Blood Service] Opyt raboty Gor'kovskoi oblastnoi sluzhby krovi. Moskva, Meditsina, 1964. 73 p. (MIRA 17:12)

1. Direktor Gor'kovskoy oblastnoy stantsii perelivaniya krovi (for Klimova).

ZAK, A.F.; KLIMOVA, N.Ye.; YERMOLOVA, O.B.; YAKOBSON, L.M.

Evaluation of the harmlessness of erythromycin based on data of various tests. Antibiotiki 10 no.7:622-625 Jl '65.
(MIRA 18:9)

1. Otdel antibiotikov Kontrol'nogo instituta imeni A.A. Tarasevicha, Moskva.

KLIMOVA, N.Ye.

Stimulating effect of erythromycin on the development of chick embryo. Antibiotiki 10 no.3:225-229 Mr '65.

(MIRA 18:10)

1. Otdel antibiotikov Kontrol'nogo instituta meditsinskikh biologicheskikh preparatov imeni L.A. Tarasevicha, Moskva.

ZAK, A.F.; KLIMOVA, N.Ye.

Acute toxicity of colimycin, mycerin and monomycin according to data from various tests. Antibiotiki 9 no.1:73-76 Ja '64. (MIRA 18:3)

1. Otdel antibiotikov (zav. - prof. L.M.Yakobson) Kontrol'nogo instituta imeni Tarasevicha, Moskva.

BRATSYKHIN, Yevgeniy Aleksandrovich; KLIMOVA, O.M., red.; ERLIKH,
Ye.Ya., tekhn. red.

[Technology of plastics] Tekhnologiia plasticheskikh mass]
Leningrad, Goskhimizdat, 1963. 399 p. (MIRA 16:4)
(Plastics)

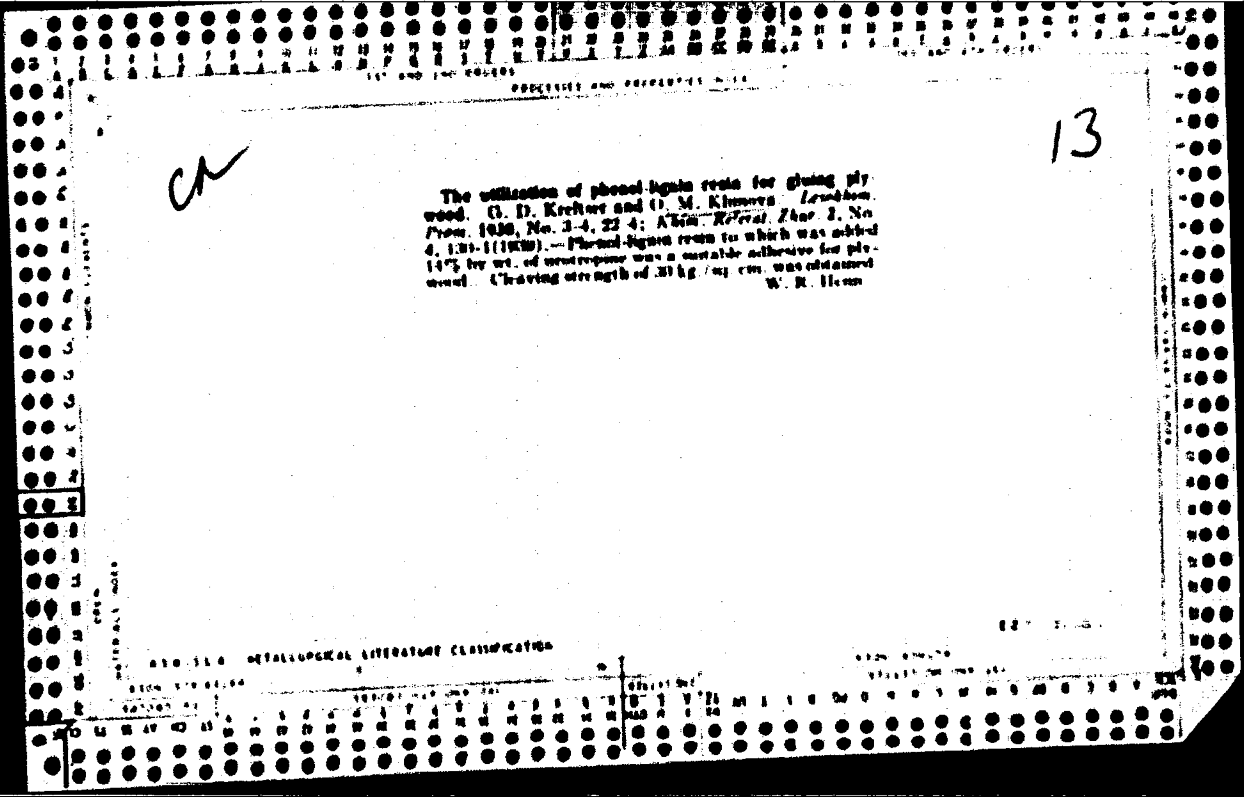
PROCESSES AND PROPERTIES INDEX

CA

13

New foliated plastic, "drevolit." Ya. M. Lokshin and O. M. Klimova. *Lesnaya Prom.* 1940, No. 4, 11-13; *Khim. Referat. Zhur.* 3, No. 4, 105(1940). Wood was satd. with an alc. soln. or with an aq. suspension of resin obtained by condensation of phenol with lignin, together with urotropine in the amt. of 10% of the resin. "Drevolit," which differs from "lignofol" by the new type of binding substance (phenol lignin resin), possesses similar mech. and dielec. properties. Its water resistance is slightly lower, especially when prepd. from a water suspension of resin. Its possible uses in industry are discussed. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

13

The utilization of phenol-lignin resin for gluing plywood. G. D. Kreitser and O. M. Klimova. *Lesokhim. Prom.* 1938, No. 3-4, 22-4; *Khim. Referat. Zhur.* 2, No. 4, 130-1 (1939).—Phenol-lignin resin to which was added 14% by wt. of urotropine was a suitable adhesive for plywood. Cleaving strength of 30 kg./sq. cm. was obtained.

W. R. Henn

METALLURGICAL LITERATURE CLASSIFICATION

2

CA

System nitric acid–sulfuric acid–water. O. M. Klimova and I. J. Zaslavskii (Ivanov Chem.-Technol. Inst.). *Zhur. Priklad. Khim.* (J. Applied Chem.) 22, [illegible]-67(1949). Values of d. were obtained for the ternary system HNO_3–H_2SO_4–H_2O and for the binary system HNO_3–H_2SO_4. In the binary system, d^{20} varies smoothly from 1.8[illegible] for H_2SO_4 to a max. of 1.8[illegible] at 18.[illegible] mole % HNO_3 and down to 1.5120 for HNO_3. K. and Z. calcd. the difference between the actual "at. concn." and the av. value, where "at. concn." is calcd. from the mol. concn. on the basis of 5 atoms per mol. HNO_3 and 7 for H_2SO_4, with intermediate values for solns. of the two compds. Values of Δd thus calcd., when plotted against concn., rise smoothly from 0 for both pure components to a broad max. of 7.78 between 33 and 50 mole % HNO_3. This is attributed to the formation of the compds. $HNO_3.2H_2SO_4$ (or $(N(OH)_3^{++})(HSO_4^-)_2$) and $HNO_3.H_2SO_4$ (or $(NO_2H_2)^+(HSO_4^-)$). The data thus obtained differ somewhat from those of Sapozhnikov (Z. phys. Chem. 49, 697(1904)). The compds. thus formed are not stable in aq. soln. Studies of d. vs. concn. curves were made with increasing concn. of H_2O; the max. in the curves disappeared when the concn. of H_2O reached 42.8 mole %. The existence of the cations $N(OH)_3^{++}$ and $NO_2H_2^+$ was also indicated by studies of vol. changes when 0.1 mole H_2O was added to various concns. of HNO_3 at 20°, compared with the behavior of solns. of $HClO_4$ (20°), H_2SO_4 (20°), H_3PO_4 (20°), AcOH (20°), EtOH (20°), MeOH (20°), iso-PrOH (15°), and glycerol (4°). For all the latter compds. the curves of change in vol. (always pos.) at concn. always decrease smoothly with increasing amt. of H_2O, in most cases levelling off at 0.33-40 mole % H_2O. With HNO_3, however, the change in vol. starts out very small in concd. soln., rises to a max., then levels off at a somewhat smaller value. Approx. values for no. of moles H_2O per mole of solute and changes in vol. for H_2SO_4, for AcOH, and for HNO_3, resp., are: 0.8, 0.[illegible], 0.4[illegible], 0.1[illegible]; 0.1, 0.83, 0.37, 0.63; 0.2, 0.72, 0.31, 0.6[illegible]; 0.6, 0.62, 0.29, 0.40; 1.0, 0.40, 0.12, 0.34. The interpretation of the HNO_3 curve is that the initial increase in vol. change is due to the formation of the ion $N(OH)_3^{++}$, and in more dil. solns. the ion $NO_2H_2^+$ is formed by the reaction $N(OH)_3^{++} + H_2O = H_3O^+ + NO_2H_2^+$. The relation of these ions and compds. to such processes as nitration reactions is considered.

Artid J. Miller

ZASLAVSKIY, I. I.; KLIMOVA, O. M.

Acids, Inorganic

Structure of complexes in the system sulfuric anhydbidenitric anhydride-water. Izv.Sekt. plat.i.blag.met. No 26, 1951.

9. Monthly List of Russian Accessions, Library of Congress, May 1952, Uncl.

KLIMOVA, O. M. 258T14

USSR/Chemistry - Sulfuric Acid, Nitrating Mixtures May 52

"Study and Classification of Compounds in the System Sulfuric Acid Anhydride - Nitric Acid Anhydride - Water," I. I. Zaslavskiy,① O. M. Klimova,② L. V. Gus'kova,③ Chair of Inorg Chem, Ivanovo Chem-Technol Inst

3

Zhur Obshch Khim, Vol 22, No 5, pp 752-758

In the above liquid system, several compds of definite chem compn were found having the general formula $N_2O_5 \cdot 4SO_3 \cdot mH_2O$. Some of the members of this group were separated in cryst form.

258T14

Their stability decreases, as the coef m increases, i.e., as the quantity of water in the compd increases. If the coef exceeds 5, this compd does not exist in the liquid state even in partially dissocd form. Attempts were made to classify known individual compds of the series $N_2O_5 \cdot 4SO_3 \cdot mH_2O$.

KLIMOVA, E. M.

U

Chemical Abstracts
Vol. 48 No. 5
Mar. 10, 1954
Inorganic Chemistry

Study and classification of the compounds in the system sulfur trioxide-nitrogen pentoxide-water. [illegible] Zas[illegible], E. M. Klimova, and L. V. [illegible] (Ivanovo Inst. Chem. Technol.). *J. Gen. Chem. U.S.S.R.* 22, 815-19(1952) (Engl. translation).—See *C.A.* 47, 8535e. H. L. H.

7-19-59

CA

23

Hydroxyethyl allyl ethers of cellulose and their copolymerization with sulfur dioxide. S. N. Ushakov and O. M. Klimova. *Zhur. Priklad. Khim.* (J. Applied Chem.) 23, 191-8(1950); cf. *C.A.* 44, 5637e.—Mixed hydroxyethyl and allyl ethers of cellulose with different degrees of substitution were treated with SO_2 in the presence of $AgNO_3$ catalyst, to yield copolymers. The amt. of SO_2 in the final product is equiv. to the content of allyl groups. The products display soly. that is directly proportional to the no. of allyl groups. Thus, the copolymer with 0.088 fraction of allyl groups, initially, and contg. 1.4% S, dissolves only partly in pyridine; a product with 18% S (higher initial allyl content) is completely insol. Increase of hydroxyethyl groups tends to offset this insoly. to some extent by the corresponding decrease of the proportion of allyl groups present. The copolymers are generally quite insol. substances. One allyl group per 3 glucose units suffices to produce a completely insol. polymer. The copolymers are sol. in concd. HNO_3 and H_2SO_4 but cannot be pptd. by diln. without change. G. M. Kosolapoff

KLIMOVA, O. M.

257732

USSR/Chemistry - Sulfuric Acid, Nitration Dec 52

"Outstanding Points on Specific-Gravity Curves for the System Nitric Acid - Oleum," V. A. Usol'tseva, ①O. M. Klimova, and ②I. I. Zaslavskiy, ③Ivanovskiy Chemicotechnological Inst

3

Zhur Prik Khim, Vol 25, No 12, pp 1309-1311

The sp gr at 20° for mixts of nitric acid and various concns of oleum were exptlly measured. It was noted that on those parts of the curves corresponding to compns with the greatest number of nitronium hydropyrosulfate molecules there are well expressed bends.

257T32

KLIMOVA, O. M.

USSR/Chemistry - Plastics Jan 52

"Hydroxyallyl Ethers of Cellulose and Their Copolymerization With Sulfurous Anhydride," S. N. Ushakov, O. M. Klimova

"Zhur Prik Khim" Vol XXVI, No 1, pp 46-56

Uniform low-mol allyl ethers of cellulose were synthesized by homogeneous medium method in following manner. Hydroxyethyl ether of cellulose (I) (sol in aq alkali solns of 18-20% concn) was prepd. I reacted with allylbromide in different proportions to yield hydroxyethylallyl ethers of cellulose (III) with different degs of substitution. Under

206T41

USSR/Chemistry - Plastics (Contd) Jan 52

exposure to air III was oxidized into insol product (IV). Polymerization of III under action of benzoyl peroxide and heat stopped at stage of gel-formation, due to spatial hindrances.

206T41

Hydroxyethyl allyl ethers of cellulose and its copolymerization with sulfur dioxide. S. N. Ushakov and [illegible] M. Kh[illegible]mova. Faserforsch. u. Textiltech. 4, 73-[illegible](1953). [illegible] F. B. Arn[illegible]

CT [illegible]

Klimova, O.M.

Tosylation of hydroxyethylcellulose and mixed ethers
containing the hydroxyethyl groups. S. N. Ushakov, O. M.
Klimova, and E. I. Feinger (Leningrad Technol. Inst.,
Leningrad). *Zhur. Priklad. Khim.* 27, 71-8(1954).—
The 2-hydroxyethyl ethers of cellulose contg. 0.2-1.0
$HOCH_2CH_2O$ units per 6 C atoms of cellulose were examd.
by means of tosylation and subsequent removal of the tosyl
group by iodine or Cl (cf. Unruh and Kenyon, C.A. 36,
1174; Murray and Purves, C.A. 35, 310). In the forma-
tion of hydroxyethyl ethers of cellulose with degree of sub-
stitution below 1, the ethylene oxide adds primarily at the
primary HO group of the cellulose unit. Ethers of this
type with 0.26 and 1.13 degree of etherification were sub-
jected to further etherification with a large excess of CH_2:
$CHCH_2Br$ in 18% aq. NaOH 1 hr. at 72-4°. The products
had a total degree of etherification of 1.51 and 2.02, resp.;
the former was sol. in MeOH, AcOH, pyridine, and cold
EtOH, insol. in H_2O, EtOAc, Me_2CO, Et_2O, and EtOH
C_6H_6; the latter mixed ether was sol. in 4-5% NaOH, cold
H_2O, pyridine, MeOH, Me_2CO, insol. in hot H_2O, Et_2O,
or EtOAc. These ethers contain few free hydroxyethyl
groups and their properties are largely detd. by the nature
of the 2nd ether radicals that are introduced. All the
above products were then tosylated after swelling in pyridine
over a 7-day period. Hydroxyethyl cellulose gave products
with 2.01-2.05 degree of tosylation, generally with an in-
crease of hydroxyethyl group content the quantity of tosyl
groups declined. The allylated product gave after tosyla-
tion only 0.027-0.09 tosyl group per cellulose unit. Treat-
ment of the tosylated products with NaI in Me_2CO 4.5 hrs.
at 110-20°, followed by analysis of the products, revealed the
regularities stated in the introductory statement.
G. M. Kosolapoff

Klimova, S. M.

Phthalic esters of oxyethylcellulose. S. V. Ushakov, S. M. Klimova and S. G. Lyubetski [illegible]

Phthalic esters were obtained [illegible] anhydride with pyridine [illegible]

K [illegible] OM

Structure of high-substituted cellulose esters [illegible]

[illegible] degree of [illegible] groups of 0.2–1.0, ethylene oxide combines chiefly with primary alcohol groups of the cellulose [illegible]

[illegible]

Klimova, O. M.

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Acetic-phthalic cellulose esters. O. M. Klimova and V. A. [illegible] (Zh. prikl. Khim. 1956 28 1849 (1955)). —The reaction mechanism was studied in experimental synthesis of acetic–phthalic cellulose esters (I) at 100 80 60 and 47° in the presence of pyridine, with phthalic anhydride (II) acetylcellulose (III; containing 53% acetate groups) mixtures in the ratios 5 : 1, 8 : 1 and 13 : 1, with II dissolved in the pyridine at reaction temp. Samples of the reaction mixture were taken at regular intervals and the acetate (IV) and phthalate group (V) contents determined by alkaline saponification. By varying the quantity of II, temp. and duration of reaction, mixed esters are obtained with a substantially different content of V. Esters of increased V content were less stable. With ratio of II : III 8 : 1 and higher there is partial substitution of some parts of IV for V. By increasing the heating period V disintegrate, resulting in a lower degree of substitution although the no. of IV is not varied. I cannot withstand prolonged heating, especially > 80—100°; their thermal stability is lowered by increase in content of V. The cellulose esters obtained dissolved in a series of org. solvents and formed transparent, elastic films 0·1—0·02 mm. thick. The combining of phthalic esters to partially hydrolysed cellulose led chiefly to formation of acid esters. The introduction of large quantities of free carboxyl groups into I indicates the possibility of obtaining trimeric cellulose derivs. Films made from I A, B and C (with degree of substitution of acetyl and phthalate, 2·34, 0·32; 2·34, 0·56, and 2·11, 0·89 respectively) had tear-resistance of 4·8, 4·2 and 3·8 kg./mm.; relative elongation, 16·2, 20·0 and 25·2%; and water absorption of 4·70, 3·25 and 2·18 wt.-% after 24 hr. (with ratio of components 5 : 1, 5 : 1 and 8 : 1 and reaction time, 15 min., 30 min. and 5 hr. respectively). A. L. B.

Distr: 4E4j/4E2c(j)

9
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7

Lensovet Technol Inst. Leningrad

KLIMOVA, G. N.,

"Relative reactivity of the OH-groups of cellulose in ethylation," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow, Leningrad Polytechnic Inst.

B-3,084,395

KLIMOVA, O.M.; PETUSHKOVA, L.F.

Studying the process of deacetylation of acetyl cellulose. Zhur. ob. khim. 27 no.8:2096-2099 Ag '57. (MIRA 10:9)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Cellulose acetates)

Klimova, O.M.

2

4

4E3d

4e4j

Structure of carboxymethylcellulose and its derivatives. O. M. Klimova and M. G. Krestalinskaya (Lensovet Tekhnol. Inst., Leningrad). Zhur. Priklad. Khim. 30, 1421-4(1957).—The effect of a radical with a free CO_2H group on the reactivity of cellulose was investigated. Carboxymethylcellulose (I) was prepd. by digestion of cellulose (II) with CH_2ClCO_2H + NaOH for 2 hrs. at 80-90°. The product was pptd. with EtOH, dialyzed, and dried at 60° giving I with γ = 63. I and II were acetylated and benzylated. II before acetylation was activated by mercerizing in 20% NaOH and aging 48 hrs. at 20°; before benzylation it was mercerized in 45% NaOH and aged 24 hrs. at 20°. I was activated by swelling in pyridine-H_2O (9:1) before acetylation and in 45% NaOH before benzylation. The values of γ of I and II obtained by acetylation were 22.6 and 43 after 8 hrs. at 20° and 52 and 147 after 1 hr. at 60°. The corresponding values after benzylation were 22 of I and 63 of II. The activity of the remaining OH groups in I and II, detd. by tritylation, remained unchanged.

I. Bencowitz

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KLIMOVA, O.M.; BOYARINOVA, L.V.

Epoxy resins from shale phenols. Khim. i tekh. gor. slan. i prod. ikh perer. no.9:226-231 '60. (MIRA 15:6)
(Epoxy resins) (Oil shales) (Phenols)

KLIMOVA, O.M.; POZDEYEVA, T.S.; BOYARINOVA, L.V.

Synthesis of resins from lignin and higher fractions of shale phenols. Khim. i tekh. gor. slan. i prod. ikh perer. no.9: 232-235 '60. (MIRA 15:6)
(Gums and resins, Synthetic) (Lignin) (Phenols)

S/080/60/033/010/020/029
D216/D306

AUTHORS: Klimova, O.M., and Ketslakh, V.Ye.

TITLE: Trityl esters of polyvinyl alcohol

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 10, 1960, 2319 - 2323

TEXT: The reaction of formation of the so-called trityl ester, i.e. the ester obtained by interaction of triphenylchloromethane with aliphatic alcohols and polysaccharides according to:

$$(C_6H_5)_3\,CCl + ROH \rightarrow (C_6H_5)_3\,COR + HCl$$

was for a long time considered as specific for compounds containing primary alcohol groups and was used to determine the structure of hydroxyl-containing low and high molecular compounds. During examination of structure of the products of polyvinyl alcohols containing primary and secondary hydroxyls, it was discovered that polyvinyl alcohol (PVS) reacts with triphenylchloromethane. The

Card 1/3

Trityl esters of polyvinyl alcohol

S/080/60/033/010/020/029
D216/D306

further study of this problems has shown the possibility of obtaining trityl esters of PVS with trityl group content of 7 to 69 pct. The initial PVS used was obtained by alkaline saponification and had a mean molecular weight of 24,000. The pre-activation of PVS was done by two methods (a) the swelling of PVS with pyridine-water mixture (1:9) for 48 hours, after which the water was removed by extractions with water-free pyridine, and (b) heating suspension of dry PVS in water-free pyridine on a boiling water bath for 4 hours with stirring. Tritylation was done in water-free pyridine since it was found that small traces of moisture inhibit reaction completely. The maximum degree of substitution (67-69 mol. pct.) was obtained using an excess of 6 times of triphenylchloromethane with respect to PVS. The increase in the quantity of triphenylchloromethane has not increased the content of trityl groups. Obtained by preactivating with boiling dry pyridine, when the yield of trityl groups decreased from 69.0 to 27 mol. %, the result served to clarify the effect of pre-activation on the tritylation reaction. The physico-chemical properties of products obtained when using

Card 2/3

different conditions changed with the change in the content of trityl groups. There are 2 tables, 2 figures and 8 references: 1 Soviet-bloc and 7 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: R.C. Hockett, and C.S. Hudson, J. Am. Chem. Soc., 56, 945, 1934; E.L. Jackson, R.C. Hockett and C.S. Hudson, J. Am. Chem. Soc., 56, 1947, 1934; Hearon, Hiatt, Fordyce, J. Am. Chem. Soc., 65, 829, 1954; D.D. Reynolds, W.O. Kenyon, J. Am. Chem. Soc. 72, 1584, 1950.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Technological Institute of Leningrad imeni Lensovet)

SUBMITTED: January 20, 1960

85448

S/080/60/033/011/010/014
A003/A001

15 8109

AUTHORS: Klimova, O. M., Datsenko, V. T.

TITLE: The Phenyl Esters of Polyvinyl Alcohol

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol. 33, No. 11, pp. 2582-2586

TEXT: The possibility was studied of synthesizing polyvinylphenyl esters with various degrees of substitution by introducing phenyl groups into the chain of polyvinyl alcohol. It was found that in the interaction of polyvinyltosyl with sodium phenolate in a medium of molten phenol (which is a solvent for both components) a complete substitution of tosyl groups by phenyl groups takes place at a temperature of 110-120°C in the course of 5 hours. For this purpose it is necessary to obtain first the tosyl esters of polyvinyl alcohol as intermediary products. The initial material was polyvinyl alcohol with a molecular weight of 24,000. It was preliminarily activated by swelling in pyridine and water or by heating a suspension cfpolyvinylchloride with an excess of pyridine anydride. To the activated material a solution of paratoluenesulfochloride in pyridine was added. The reaction took place at 18°C during 3-5 days. The substance obtained was washed and dried at a residual pressure of 2-4 mm at a temperature of 30-40°C.

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S/080/60/033/011/010/014
A003/A001

The Phenyl Esters of Polyvinyl Alcohol

It was shown that the degree of adding tosyl groups to polyvinyl alcohol was determined by the ratio of the latter to paratoluenesulfochloride and the duration of the tosylation reaction. The tosyl esters obtained are well soluble in the cold in pyridine, acetone, phenol, and during heating or long standing in chloroform, dioxane, benzyl alcohol and aniline. The tosyl esters obtained were treated with sodium phenolate in the presence of molten phenol. Sodium phenolate was introduced in the amount of 5-7 moles per 1 mole of tosyl ester. The mixture was heated to 90°C until complete dissolution of all components, after which the temperature was raised to 115-120°C. The reaction took place at this temperature during 6 hours under continuous stirring. Several phenyl esters of polyvinyl alcohol were obtained with various degrees of substitution. Phenyl esters containing 31.0 and 88.4 molar % of phenyl groups were tested for resistance to alkaline and acidic solutions. They proved to be resistant to 0.1 n aqueous and alcohol solutions of KOH during boiling for 4.5 hours. A 25% aqueous solution of NaOH does not act on the phenyl ester of the polyvinyl alcohol in the cold. Concentrated sulfuric and nitric acids dissolve the polymer. Esters with a high content of phenyl groups melt at 130-150°C. From a chloroform solution of a polymer containing 48.3 molar % of phenyl groups hard, transparent, lustrous films were obtained which had a high adhesion to glass. The method described

Card 2/3

USHAKOV, S.N.; KLIMOVA, O.M.; KARCHMARCHIK, O.S.; SMUL'SKAYA, E.M.

Synthesis of blood substitute polymers exhibiting the properties of inhibitors-antioxidants. Dokl. AN SSSR 143 no.1:231-234 Mr '62.
(MIRA 15:2)

1. Chlen-korrespondent AN SSSR (for Ushakov).
(BLOOD PLASMA SUBSTITUTES)
(VINYL COMPOUND POLYMERS)
(CANCER RESEARCH)

KLIMOVA, O.M.; KURAS, A.M.; STEPANOV, V.V.; KHARLAMOVA, N.I.

Synthesis of polyvinylene glycol derivatives. Zhur.prikl. khim. 37 no. 5:1152-1155 My '64. (MIRA 17:7)

1. Leningradskiy Tekhnologicheskiy institut imeni Lensoveta.

L 33945-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RM RM/WW
ACCESSION NR: AP4047205 S/0190/64/006/010/1799/1801

AUTHOR: Kazanskaya, V. F.; Klimova, O. M.; Khlebnikov, B. M.

TITLE: Copolymerization of vinylhydroquinone dibenzoate with acrylic and methacrylic acids

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 10, 1964, 1799-1801

TOPIC TAGS: vinylhydroquinone dibenzoate, acrylic acid, methacrylic acid, vinylhydroquinone copolymerization, polyacrylic acid, polymethacrylate, azoisobutyrodinitrile

ABSTRACT: The copolymerization of vinylhydroquinone dibenzoate (VHD) with acrylic (AC) and methacrylic acid (MAC) was carried out in sealed Carrius tubes in toluene in the presence of azoisobutyro-dinitrile (1% by weight of the monomers) at 60C. The length of the reaction ranged from 40 min. to 2 hours. The polymers obtained were washed with toluene and ether, dissolved in dimethylformamide, and precipitated with one of the following reagents: dichlorethane, petroleum, ether or acetic acid. The material was dried in a vacuum at 60C, and the results of the experiment were analyzed for monomer activity by the integral method of Mayo and Lewis. The values of r_1 and r_2 for the AC-VHD pair were found to be 0.44 ± 0.13 and 0.95 ± 0.002, respectively. For the MAC-VHD pair, they

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L 33945-65

ACCESSION NR: AP4047205

were 1.91 ± 0.23 and 0.91 ± 0.25, respectively. The specific activity (Q) of VHD based on data from its copolymerization with AC was 1.3, polarity (c) 0.06, while for VHD with MAC Q was 1.80 and c was 0.04. On the basis of these data, the authors conclude that the specific activity of VHD is of the same order of magnitude as that of styrene. Orig. art. has: 2 formulas and 2 tables.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad technological institute)

SUBMITTED: 02Dec63 ENCL: 00 SUB CODE: OC

NO REF SOV: 001 OTHER: 007

Card 2/2

L 54963-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RPL WW/RM

ACCESSION NR: AP5014168 UR/0080/65/038/005/1188/1191

678.13

33

32

B

AUTHOR: Klubikova, L. Ye.; Klimova, O. M.; Yarosh, A. V.

TITLE: Copolymerization of vinylenecarbonate and vinylacetate using redox initiator systems

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 5, 1965, 1188-1191

TOPIC TAGS: copolymerization, vinylenecarbonate, vinylacetate, redox initiator, polymerization initiator

ABSTRACT: The effect of oxygen, mixing, temperature, and pH on copolymerization of vinylenecarbonate with vinylacetate and the composition of the copolymer was studied in order to determine optimal reaction conditions. The study was done in an aqueous medium using the following redox initiator: $FeCl_3 + ZnO$ + UV irradiation; $N_2H_4 + CuSO_4$; $H_2C_2O_4$ + UV irradiation; and $(NH_4)_2S_2O_8$ + ascorbic acid. There has been no reference in the literature as to the use of the "$(NH_4)_2S_2O_8$ + ascorbic acid" system as a copolymerization initiator for vinylenecarbonate and vinylacetate. The highest copolymer yields (in the range from 60 to 70% 0 were obtained at 20°C using a

Card 1/2

L 54963-65
ACCESSION NR: AP5014168

1

starting monomer ratio of 20 mol % of vinylenecarbonate to 80 mol % of vinylacetate, water:monomer ratio 4:1, 0.01 mol % per liter of $(NH_4)_2S_2O_8$, and 0.01 mol per liter of ascorbic acid. The copolymerization proceded for 48 hours. Depending upon actual composition the copolymer has a characteristic viscosity in dimethylformamide $[n]_{20^\circ}$ varying from 1 to 2.5. Orig. art. has: 3 figures and 3 tables.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Institute of Technology)

SUBMITTED: 04Jul64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 003 OTHER: 003

Card 2/2

~~[illegible] EWT(m)/EWP(j)/T IJP(c) WW/RM~~

ACC NR: AP6021974 (A) SOURCE CODE: UR/0153/66/009/002/0314/0316

AUTHOR: Kazanskaya, V. F.; Klimova, O. M.; Tikhomirov, E. A.; Sokolov, G. I. 22 32

ORG: Plastics Technology Department, Leningrad Technological Institute im. Lensovet (Kafedra tekhnologii plasticheskikh mass, Leningradskiy tekhnologicheskiy institut)

TITLE: Copolymerization of vinylene carbonate with acrylonitrile in aqueous solutions

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 9, no. 2, 1966, 314-316

TOPIC TAGS: acrylonitrile, carbonate, copolymerization

ABSTRACT: Vinylene carbonate (VC) was copolymerized with acrylonitrile (AN) in 8% aqueous solutions at 20°C without adding any special initiators. All the copolymers were purified by reprecipitation from a dimethyl sulfoxide - acetone mixture, the degree of conversion was determined gravimetrically, and the copolymer composition was obtained from ultimate analysis. The relative activity constants of VC and AN were calculated from the dependence of the copolymer composition on the composition of the initial VC - AN mixture, and found to be: for VC, $r_1 = 0.086 \pm 0.051$; for AN, $r_2 = 3.280 \pm 0.117$. The specific activity Q for VC was 0.043, and the polarity factor $e = -0.41$. The intramolecular distribution of monomer units in the copolymers was calculated. The probability of finding two consecutive VC units is very small, even for an 80:20 ratio of AN to VC in the initial mixture; hence, the copolymer molecule

Card 1/2 UDC: 678.744.4-134.532

L 39077-66

ACC NR: AP6021974

is a chain consisting of large blocks of AN units which include single VC units. The VC-AN copolymers are similar in properties (solubility, capacity to form films or fibers) to polyacrylonitrile. 15 Orig. art. has: 1 figure and 2 tables.

SUB CODE: 11/ 07/ SUBM DATE: 26Oct64/ ORIG REF: 004/ OTH REF: 005

Card 2/2 mLP

L 41332-66 EWT(m)/EWP(j)/T/EWP(k) IJP(c) WW/RM

ACC NR: AP6025625

SOURCE CODE: UR/0413/66/000/013/0079/0079

AUTHORS: Klimova, O. M.; El'kinson, S. I.

60

B

ORG: none

TITLE: Preparative method for copolymers of vinylene carbonate. Class 39, No. 183391 /announced by Leningrad Technological Institute imeni Lensovet (Leningradskiy tekhnologicheskiy institut)/

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 79

TOPIC TAGS: copolymer, vinyl plastic, thermal stability, ~~polymer~~ ultrasound absorption

ABSTRACT: This Author Certificate presents a preparative method for copolymers of vinylene carbonate. To obtain thermally stable polymeric materials, the solution of vinylene carbonate and polystyrene or poly(methyl methacrylate) in an organic solvent is subjected to the action of ultrasound. [04]

SUB CODE: 07/ SUBM DATE: 22Feb65/ ATD PRESS: 5158

Card 1/1 11b

UDC: 678.744.52-134.433.5.678.744.52-134.622

KLIMOVA, P. G.

KLIMOVA, P.G.

[illegible]

Use of aloe extract in certain otolaryngological diseases. Vest. oto-rin. 16 no.3:81-82 My-Je '54. (MIRA 7:7)

1. Iz polikliniki No.1 Ministerstva zdravookhraneniya SSSR, Moskva.
(OTORHINOLARYNGOLOGY,
*otorhinolaryngol. dis., ther., Aloe extracts)
(ALOE, therapeutic use,
*otorhinolaryngol. dis.)

ORLOVA, L.V.; KLIMOVA, S.P.; RODIONOV, V.M.

Radioprotective qualities of the adrenocorticotropic hormone (ACTH).
Med. rad. 9 no.6:19-22 Je '64. (MIRA 18:2)

1. Institut biologicheskoy i meditsinskoy khimii AMN SSSR.

RODIONOV, V.M.; ORLOVA, L.V.; TUUL', L.I.; KLIMOVA, S.P.

Effect of stimulation of the peripheral end of the splanchnic nerve on the secretory function of the adrenal cortex. Dokl. AN SSSR 151 no.5:1238-1240 Ag '63. (MIRA 16:9)

1. Institut biologicheskoy i meditsinskoy khimii AMN SSSR. Predstavleno akademikom A.N.Bakulevym.
(ADRENAL CORTEX) (NERVES, SPLANCHNIC)

KLIMOVA, T.K.; LEVACHEV, I.A.; STAROSTINA, A.V.; VITEZEVA, K.A.

Some data on tularemia in Archangel Province. Zhur. mikrobiol., epid. i immun. 40 no.6:48-54 Je '63. (MIRA 17:6)

1. Is Leningradskoy protivochumnoy portovoy i gorodskoy nablyudatel'noy stantsii.

LIPKIN, M.Ye.; ARTYKOV, M.S.; ISAYEV, Yu.V.; POLULYAKH, P.A.; VARIVODINA, T.A.; SHILYAYEV, L.F.; PUN'KO, T.A.; ANDREYEVA, A.P.; BAKULINA, L.I.; ABRAMOVA, S.G.; KLIMOVA, T.K.; YEGOROV, V.A.; KEVEYEV, N.I.; KABIROVA, M.B.; DASHEVSKIY, V.V.; SORKIN, Yu.I.; KOLENDOVICH, A.I.; SERGEYEVA, L.I.; NAGAYEV, V.N.; NESTEROVA, G.N.; ALEKSEYEVA, N.A.; GOLUBEVA, V.N.; ANISIMOVA, T.I.; OVASAPYAN, O.V.; GALOYAN, V.O.; ARAKELYAN, K.A.

Abstracts of articles received by the editors. Zhur.mikrobiol., epid. i immun. 42 no.3:147-152 Mr '65. (MIRA 18:6)

KLIMOVA, T.Kh.; LORANSKIY, D.N.; YANKOVSKAYA, Z.V.; YANIN, L.V., red.; YEGOROV, Yu.L., red.; MIRONOVA, A.M., tekhn. red.

[Collection of the most important official data on problems of industrial hygiene and industrial sanitation] Sbornik vazhneishikh ofitsial'nykh materialov po voprosam gigieny truda i proizvodstvennoi sanitarii. Moskva, Medgiz. No.1. 1962. 314 p. (MIRA 15:10)

(INDUSTRIAL HYGIENE—LAW AND LEGISLATION)

ACC NR: AP7001405 (A) SOURCE CODE: UR/0413/66/000/021/0107/0108

INVENTOR: Lashkov, K. A.; Klimova, T. N.; Fomichev, V. A.; Matsyuk, L. N. Kolobkov, Yu. M.

ORG: none

TITLE: Device for heat-pulse welding of polymer films. Class 39, No. 187991

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 107-108

TOPIC TAGS: polymer film, polymer heat resistance, ~~film welding,~~ ~~heat-pulse~~ welding ~~device~~ equipment / ~~closed contour article, curvilinear lap weld~~

ABSTRACT: An Author Certificate has been issued for a device for heat-pulse welding of polymer films. The device consists of two insulation blocks, heating elements

Fig. 1.

1 - Bottom block; 2 - s-shaped support; 3 - top block.

Card 1/2

UDC: 621.791.46.052.2.037

ACC NR: AP70001405

in the form of metal strips with copper inserts, and a support. To obtain closed-contour articles with a curvilinear lap weld, the blocks have a surface curvature corresponding to that of the articles to be welded, and the bottom block is mounted on an s-shaped support. Orig. art. has: 1 figure.

SUB CODE: 11, 13/ SUBM DATE: 15Aug63/ ATD PRESS: 5109 [BO]

Card 2/2

MAKULOV, N.A.; ORLOVA, S.A.; KLIMOVA, T.P.

Analytic possibilities of the ten-channel MFS-2 photoelectric spectrometer. Trudy Giprotsvetmetobrabotka no.24:347-354 '65.

(MIRA 18:11)

KLIMOVA, T.P., kand.med.nauk

Blunt wounds of the eye and their treatment. Zdrav.Belor. 5
no.6:31-33 Je '59.
(MIRA 12:9)

1. Iz Belorusskogo instituta usovershenstvovaniya vrachey
(zav.kafedroy oftal'mologii - prof.M.M.Zolotareva) i glaznogo
otdeleniya Minskoy oblastnoy bol'nitsy (glavvrach G.A.TSgoyev).
(EYE--WOUNDS AND INJURIES)

L 24310-66 EWT(m)/EWP(j)/T IJP(c) RM

ACC NR: AP6009525 (A) SOURCE CODE: UR/0413/66/000/005/0049/0049

AUTHOR: Laptev, N. G.; Shemtova, M. R.; Tabachnikova, N. I.; Klimova, T. S.

23
B

ORG: none

TITLE: Preparation of light-resistant, migration-resistant, and heat-resistant varnishes. Class 22, No. 178404 [announced by the Scientific-Research Institute for Organic Semifinished Products and Dyes (Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 5, 1966, 49

TOPIC TAGS: varnish, heat resistant varnish, light resistant varnish, migration resistant varnish

ABSTRACT: An Author Certificate has been issued describing a method for obtaining light-resistant, migration-resistant, and heat-resistant varnishes made with sulfonated linear quinacridone. To produce varnishes suitable for coating plastics, rubber, and film-forming compounds, the sulfonated linear quinacridone, either in the form of a water solution of the free acid or in the form of a water-soluble

2

Card 1/2 UDC: 667.636.44/46

L 24516-66

ACC NR: AP6009525

0

salt is treated with the water solution of one of the salts of the first, third, and eighth metal group, whereby the process is conducted in the presence of dispersion agents. [LD]

SUB CODE: 11/ SUBM DATE: 05Jan65/

Card 2/2 BL-C

KLIMOVA, T. V.

Klimova, T. V. - "Results of investigatin the printing chronograph", Soobshch. Gos. astron. in-ta im. Shternberga, No. 31, 1949, p. 20-26.

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

L 10904-66 EWT(m)/T/EWA(m)-2/EWA(h) IJP(c)

ACC NR: AP6002614 SOURCE CODE: UR/0258/65/005/006/1010/1020

AUTHOR: Galkin, V. S. (Moscow); Gusev, V. N. (Moscow); Klimova, T. V. (Moscow) 67

55 55 55

65

ORG: none

TITLE: Characteristics of a hypersonic viscous gas flow past bodies of simplest shape and their aerodynamic characteristics

1,55

SOURCE: Inzhenernyy zhurnal, v. 5, no. 6, 1965, 1010-1020

TOPIC TAGS: hypersonic aerodynamics, aerodynamic characteristics, viscous flow, boundary layer, lift, drag coefficient, friction coefficient

ABSTRACT: This paper presents an analysis of theoretical and experimental data obtained from a large number (19) of studies related to the characteristics of hypersonic viscous gas flows past slender sharp- and blunt-nosed cones and their aerodynamic characteristics at various angles of attack in thermodynamically perfect gas flows. In section 1, hypersonic viscous flows past heat-insulated and cooled ($T_w \ll T_0$) slender, sharp-nosed cones with various semiapex angles θ and angles of attack α are considered. The behavior of drag and lift coefficients under various flow conditions, their dependence on the Knudsen number and parameter $\theta\sqrt{R_e}$, and the limits of applicability of the free molecular theory are discussed. Section 2 deals with hypersonic viscous flows past blunt-nosed cones and discusses the effects of viscosity and bluntness on the drag coefficient, the boundary

Card 1/2 UDC: 533.6.011.55

L 10904-66

ACC NR: AP6002614

layer displacement effect on flow, similarity parameters, and conditions at various angles of attack. Hypersonic rarefied gas flows over flat plates are treated in section 3, where the effect of rarefaction on the friction coefficient, the flow above the plate and the influence of the angle of attack on zones of rarefaction are examined. An approximate method for calculating the flow past slender blunted bodies is outlined in section 4. The complexity of the determination of the inviscid part of the flow is stressed and the necessity of using rough assumptions, as has been done by H. K. Cheng (TASS v. 28, no. 5, 1961), is pointed out. Hypersonic, viscous flow past a blunt-nosed cone is treated as an illustrative example, assuming that the pressure on the outer boundary of an entropy layer is given by the Busemann formula. Distributions of boundary layer thickness, friction and drag coefficients, and pressure on the cone surface were calculated on a computer. The pressure distribution which characterizes the effect of boundary layer—viscous flow interaction on the flow structure is given in graphs and appears primarily in the region of minimum pressure and behind it. Orig. art. has: 9 figures and 4 formulas. [AB]

SUB CODE: 20 SUBM DATE: 15Jun65/ ORIG REF: 011/ OTH REF: 008/ ATD PRESS: 4172

6C

Card 2/2

L 55935-65 EWT(d)/EWT(l)/EWP(m)/EWT(m)/EWP(w)/EWG(v)/EWA(d)/EWP(v)/EWP(k)/
FCS(k)/EWA(h)/EWA(c) Pd-1/Po-5/Pf-4/Peb WW/EM

ACCESSION NR: AP5016262 UR/0258/65/005/003/0416/0424
533.6.011.55

47

AUTHOR: Gusev, V. N. (Moscow); Klimova, T. V. (Moscow); Korolev, A. S. (Moscow); Kryukova, S. G. (Moscow); Nikolayev, V. S. (Moscow)

TITLE: Hypersonic, viscous gas flows past sharp-nosed cones 21

SOURCE: Inzhenernyy zhurnal, v. 5, no. 3, 1965, 416-424

TOPIC TAGS: hypersonic flow, hypersonic viscous flow, hypersonic flow past cone, hypersonic similitude, real gas effect, drag, friction drag, boundary layer, hypersonic interaction parameter, boundary layer interaction

ABSTRACT: Hypersonic, viscous gas flows past slender sharp-nosed, thermally-insulated cones at arbitrary angles of attack are investigated. On the basis of the law of viscous hypersonic similitude, expressions are derived for pressure and local skin-friction coefficients, and for the drag acting on the body in the direction of flow. Two limiting cases are considered, that is, 1) when the relative thickness of the boundary layer δ is $\ll \theta$ (where θ is a thickness ratio), and 2) when $\delta \sim \theta$. In the first case, the friction drag is negligibly small as compared with the wave drag, but in the second case they are comparable. Thus,

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L 54035-65
ACCESSION NR: AP5016262

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the magnitude of the drag is essentially dependent on the relative thickness of the boundary layer; it was determined experimentally in vacuum and in helium aerodynamic wind tunnels at $M_\infty = 5.15$ with $\delta < \theta_k$; at $M = 18.5$, 20, and 21.5 with $\delta \sim \theta_k$, respectively; for cones of semiapex angles of $5° \leqslant \theta_k \leqslant 20°$. The values of the displacement thickness were determined by measuring the angle of the shock wave recorded by the glow-discharge method. The values of the total drag coefficient were plotted as a function of the parameter $\theta_k^2 \sqrt{Re_0}$. Optimal parameters of sharp-nosed cones in hypersonic viscous gas flows with respect to minimum drag were investigated at various fixed values of one of the geometric parameters, such as length, surface, or volume. Hypersonic viscous gas flows past cones at small, then at large angles of attack, were also considered and experimentally investigated at the following values of the hypersonic interaction parameter: $\chi_\infty = 2.5$, 4.5, and 4.7. An analysis of the results shows that viscosity effects are substantial only at small angles of attack in the range of interaction parameter considered here, and that when the angle of attack is increased, the magnitudes of the total forces applied to the cone by a viscous flow coincide with those obtained from using the theory of ideal flows. Orig. art. has: 5 figures and 5 formulas. [AB]

ASSOCIATION: none

Card 2/3

KLIMOVA, V.

To the Tatra Mountains on new electric motorcars. p. 98.
Green light ot the Spartakiad of railroad men. p. 99.
ZELEZNICE, Prague, Vol. 4, no. 4, Apr. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6, June 1956, Uncl.

[illegible]

KLIMOVA, V.

I was founding steel. IUn. tekh. no.4:60-62 Ap '57. (MLRA 10:6)
(Steelworkers)

KLIMOVA, Y.

Let us have more professional schools. IUn. tekh. 2 no.7:16-20 Jl '58. (MIRA 11:10)

(Professional education)

KLIMOVA, V.

Corn grown by Ryazan students. IUn.tekh. 4 no.11:57-58 N '59.
(MIRA 13:4)

(Ryazan region--Corn (Maize))

KLIMOVA, Y.

Two tunnels. Tekh.mol. 28 no.5:25-26 '60. (MIRA 13:7)
(English Channel--Tunnels)
(Mont Blanc--Tunnels)

KLIMOVA, V.

Utilizing hidden potentialities at enterprises in Latvia. Sots. trud 6 no. 2:131-133 F '61. (MIRA 14:2)

1. Nachal'nik sektora tekhniko-ekonomicheskikh obosnovaniy TSentral'nogo konstruktorskogo byuro upravleniya khimicheskoy i silikatno-keramicheskoy promyshlennosti sovnarkhoza Latviyskoy SSR.
(Latvia--Chemical industries--Labor productivity)
(Latvia--Ceramic industries--Labor productivity)

KLIMOVA, V.

Next comes the problem of muscles. Tekh.mol. 28 no.4:37-38 '60. (MIRA 13:11)
(Muscles) (Human engineering)

KLIMOVA, V.

"Fundamentals of concrete economics"; series of booklets.
Reviewed by V. Klimova. Tekh.mol. 29 no.8:33-34 '61. (MIRA 14:11)
(Economics)

KLIMOVA, V.A.; ZABRODINA, K.S.

Microdetermination of alkoxyl groups by the Zeisel-Viebock modified method. Zhur. anal. khim. 18 no.1:109-112 Ja '63.
(MIRA 16:4)

1. N.D. Zelinsky Institute of Organic Chemistry, Academy of Sciences, U.S.S.R., Moscow.
(Alkoxy groups)

1

Determination of o-nitroaniline in a mixture with large quantities of p-nitroaniline. A. P. Terent'ev, V. A. Klimova and V. P. Pusareva. *Anilinokrasochnaya Prom.* 4, 324-7(1934).—The detn. is based on the sepn. of the 2 isomers by distn. with steam. Det. the sum of o- and p-$O_2NC_6H_4NH_2$ by titration with $NaNO_2$. Place 10 g. sample and 750 cc. H_2O in a Wurtz flask provided with a dropping funnel and a reflux condenser and heat with a gradual addn. of 200 cc. H_2O in a Rahn funnel for 40 min. until 400 cc. of the distillate has come over. Wash the condenser with dil. HCl, dil. to 500 cc., and titrate the ortho isomer in the distillate with 0.1 *N* $NaNO_2$ against I and starch soln. The method when checked with prepd. mixts. of pure isomers is accurate to 0.3% with 2.5% and to 0.4% with 7.0% ortho isomer. The method was successfully used in the control of nitration by [illegible] and then proceeding as above. The presence of $C_6H_4(NH_2)_2$ has no effect on the results. Because PhNH$_2$ is diazotized much more slowly than $O_2NC_6H_4NH_2$, the detn. can be made in the presence of a little PhNH$_2$. C. B.

METALLURGICAL LITERATURE CLASSIFICATION

KLIMOWA, V. A.

"Synthese des composes organostanniques en passant par les diazoiques".
Kotchechkow, K. A., Nesmejanow, A. N. et Klimowa, W. A. (p. 167)

SO: Journal of General Chemistry (Zhurna Obshchei Khimii) 1936, Volume 6, No. 2

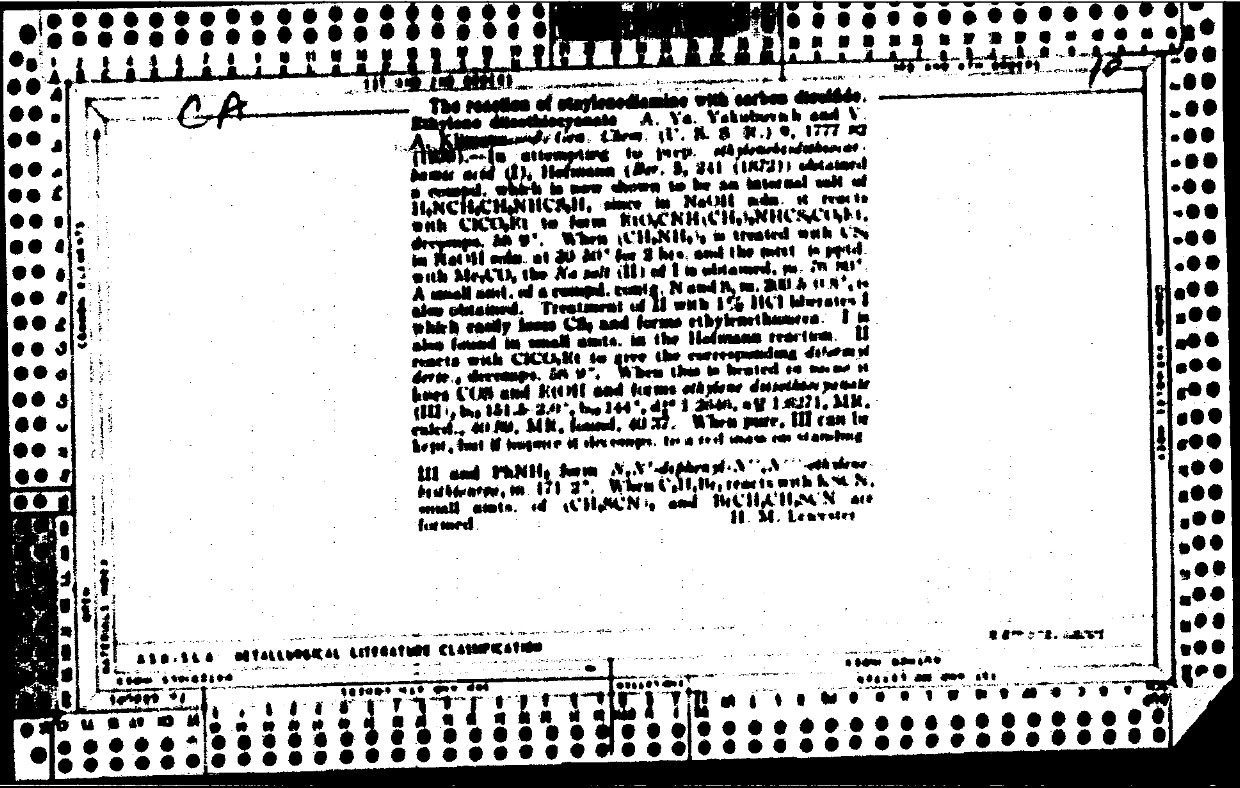
CA

11E

The influence of a meat ration on the glycogen and lactic acid in mice at rest and during physical exercise. L. M. Maharevich-Hal'pern and V. Khmura. *J. Physiol.* (U. S. S. R.) 24, 820-3(in German 824)(1938). — The glycogen content of mice at rest, after exercise and after a 10-minute recovery period is 237, 172 and 261 mg. %, resp., on a meat diet and 207, 107 and 182 mg. %, resp., on a bread and milk diet. The lactic acid content under the same conditions is 61, 144 and 93 mg. % on a meat diet and 59, 98 and 78 mg. %, resp., on a bread and milk diet.

S. A. Karjala

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

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The reaction of ethylenediamine with carbon disulfide. Ethylene diisothiocyanate. A. Ya. Yakubovich and V. A. Klimova. *J. Gen. Chem.* (U. S. S. R.) 9, 1777-82 (1939).—In attempting to prep. *ethylenebisdithiocarbamic acid* (I), Hofmann (*Ber.* 5, 241 (1872)) obtained a compd. which is now shown to be an internal salt of $H_2NCH_2CH_2NHCS_2H$, since in NaOH soln. it reacts with $ClCO_2Et$ to form $EtO_2CNH(CH_2)_2NHCS_2CO_2Et$, decomp. 86-9°. When $(CH_2NH_2)_2$ is treated with CS_2 in NaOH soln. at 20-30° for 2 hrs. and the mixt. is pptd. with Me_2CO, the *Na salt* (II) of I is obtained, m. 20-30°. A small amt. of a compd. contg. N and S, m. 203.5-4.5°, is also obtained. Treatment of II with 1% HCl liberates I which easily loses CS_2 and forms ethylenethiourea. I is also found in small amts. in the Hofmann reaction. II reacts with $ClCO_2Et$ to give the corresponding *dithiocarbamate*, decomp. 86-9°. When this is heated in vacuo it loses COS and EtOH and forms *ethylene diisothiocyanate* (III), b_{10} 131.5-2.0°, b_{20} 144°, d_4^{20} 1.2848, n_D^{20} 1.6271, MR calcd., 40.86, MR found, 40.37. When pure, III can be kept, but if impure it decomps. to a red mass on standing. III and $PhNH_2$ form *N,N'-diphenyl-N'',N'''-ethylenebisthiourea*, m. 171-2°. When $C_2H_4Br_2$ reacts with KSCN, small amts. of $(CH_2SCN)_2$ and $BrCH_2CH_2SCN$ are formed.

H. M. Leicester

ASO-SLA METALLURGICAL LITERATURE CLASSIFICATION

KLIMOVA, V.A.

4 chem

Rapid methods for microelementary analysis. I. Determination of carbon and hydrogen in samples containing carbon, hydrogen, and oxygen. M. O. Korshun and V. A. Klimova. *Zhur. Anal. Khim.* 2, 274-80(1947).—A microcombustion method for detg. C and H is described. This method differs from the conventional one in using an empty combustion tube contg. the sample inside a microthimble. The combustion is carried out in a stream of O flowing at a rate of 30-80 cc./min. The combustion temp. is 900° and the time of combustion 10-15 min. Volatile liquids are placed inside a coiled capillary. Just before placing the capillary into the combustion tube, one end is broken off with pincers and the open end is rapidly inserted into a quartz thimble; the whole is then inserted into the combustion tube in a horizontal position, the closed end of the thimble nearest the tube's inlet. With these improvements a no. of solid, liquid, and highly volatile org. compds. were analyzed with an accuracy of ±0.3%.

M. Hosch

PROCESSES AND PROPERTIES INDEX

B

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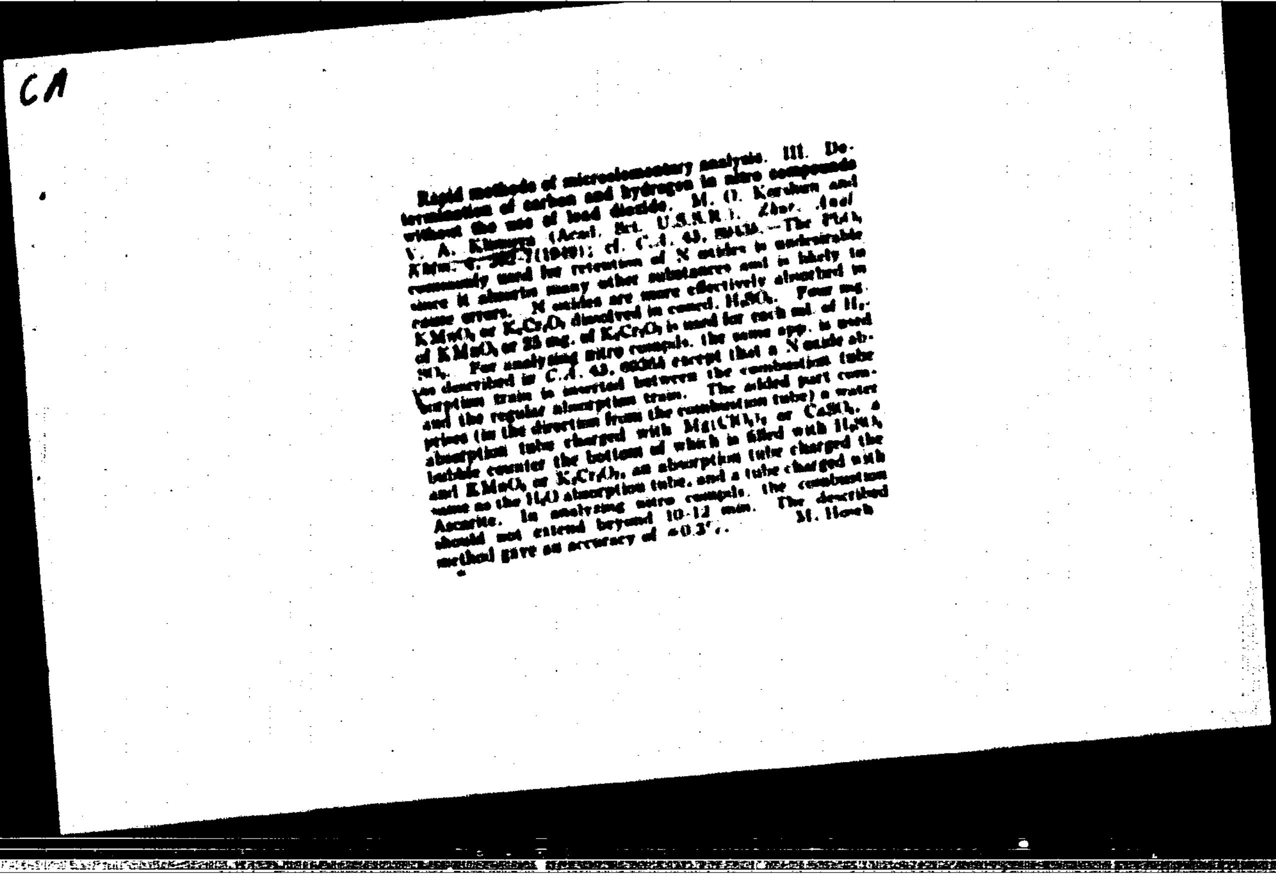
Rapid Methods for Microelementary Analysis. Part II. (In Russian.) M. O. Korshun and V. A. Klimova. *Zhurnal Analiticheskoi Khimii* (Journal of Analytical Chemistry), v. 3, May-June 1948, p. 176-180.

Gives results of an investigation of the formation of oxides of nitrogen by some classes of N-containing compounds during combustion in a stream of oxygen. Under the conditions described; amines, amides, and amine compounds form up to 0.5% oxides of N. However, it was found that these classes of compounds can be analyzed in the same manner as those containing only C, H, and O.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

Rapid methods of microelementary analysis. III. Determination of carbon and hydrogen in nitro compounds without the use of lead dioxide. M. O. Korshun and V. A. Klimova (Acad. Sci. U.S.S.R.). *Zhur. Anal. Khim.* 4, 292-7(1949); cf. *C.A.* 43, 8996b.—The PbO_2 commonly used for retention of N oxides is undesirable since it absorbs many other substances and is likely to cause errors. N oxides are more effectively absorbed in $KMnO_4$ or $K_2Cr_2O_7$ dissolved in concd. H_2SO_4. Four mg. of $KMnO_4$ or 25 mg. of $K_2Cr_2O_7$ is used for each ml. of H_2SO_4. For analyzing nitro compds. the same app. is used as described in *C.A.* 43, 8996b except that a N oxide absorption train is inserted between the combustion tube and the regular absorption train. The added part comprises (in the direction from the combustion tube) a water absorption tube charged with $Mg(ClO_4)_2$ or $CaSO_4$, a bubble counter the bottom of which is filled with H_2SO_4 and $KMnO_4$ or $K_2Cr_2O_7$, an absorption tube charged the same as the H_2O absorption tube, and a tube charged with Ascarite. In analyzing nitro compds. the combustion should not extend beyond 10-12 min. The described method gave an accuracy of ±0.3%. M. Hoch [illegible] A.

183T27

USSR/Chemistry - Analytical Jul/Aug 51

"Rapid Methods for the Microanalysis of Elements IV. New Dry Absorbent for Recovery of Nitrogen Oxides in the Determination of C and H in Organic Nitrogen Compounds," V. A. Klimova, M. O. Korshun, Inst Org Chem, Acad Sci USSR, Moscow

"Zhur Analit Khim" Vol VI, No 4, pp 230-233

New dry absorbent (silica gel moistened with soln of $K_2Cr_2O_7$ in H_2SO_4) has been proposed and introduced into org microanal to collect nitrogen oxides formed in rapid combustion anal of org N compds.

LC 183T27

USSR/Chemistry - Analytical (Contd) Jul/Aug 51

One charge lasts for 100-150 analyses of any org N compds. Coarsely porous silica gel gives longer service per charge than finely porous.

LC 183T27

KLIMOVA, V. A.

USSR/Chemistry, Analytical - Organosil- 21 Jun 52
icon Compounds

"Rapid Microelemental Analysis Method; Simultaneous Determination of Carbon, Hydrogen, and Silicon," V.A. Klimova, M.O.Korshun, Ye. G. Bereznitskaya, Inst of Org Chem, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXXIV, No 6, pp 1175-1178

In pyrolytic decompn of organosilicon compds by rapid combustion, silicon carbide is not formed by all classes of these compds. In rapid decompn, no silicon carbide is formed by compds contg a naphthalene nucleus or alkoxyl groups. Conversely, it is generally formed by tetraalkylsilanes and by compds contg

223T23

unsatd radicals, although they may burn up completely without carbide formation, if decompn is slow under conditions of partial pyrolysis. Under those conditions, in addn to detn of C and H, Si can be detd simultaneously from the same sample with an accuracy of 1%. Presented by Acad A. N. Nesmeyanov 24 Apr 52.

223T23

KLIMOVA, V.A.

USSR/ Chemistry - Analytical chemistry

Card 1/1 : Pub. 145 - 4/10

Authors : Korshun, M. O.; Terentyeva, Ev. A.; and Klimova, V. A.

Title : Rapid micro-elementary analysis methods. Part 8.-Simultaneous microdetermination of C, H and P in phosphoro-organic compounds of the C,H,O,P and N-composition.

Periodical : Zhur. anal. khim. 9/5, 275-281, Sep-Oct 1954

Abstract : A new method for simultaneous micro-determination of C,H, and P in compounds of C,H,O,P and N-composition, is described. The time of one analytical determination is about 1.5 hrs and the deviation from the theory does not exceed 0.3%. The advantages of the new method are: rapidity, possibility of analyzing substances which do not yield to decomposition by other methods, combined determination of P,C and H in the very same batch and preservation of the quartz test installation from corrosion. Results obtained by the new method are shown in table. Twenty-nine references: 8-USSR; 6-German; 5-USA; 4-French; 1-Italian; 1-English; 1-Australian; 1-Czech; 1-Hungarian and 1-Belgian (1898-1953).

Institution : Acad. of Sc. USSR, Institute of Elementary-Organic Compounds, Moscow

Submitted : July 9, 1954

NIH Translation - /M.

KLIMOVA, V. A.

USSR/Chemistry

Card 1/1

Authors : Klimova, V. A., Korshun, M. O., and Bereznitskaya, E. G.

Title : High-speed methods of microelementary analysis. Simultaneous determination of carbon, hydrogen, and phosphorus in organo-phosphorus compounds

Periodical : Dokl. AN SSSR, 96, Ed. 2, 287 - 288, May 1954

Abstract : New methods for microelementary analysis of organo-phosphorus compounds are discussed. Table is included showing the results obtained by such a high speed method and aided by a chromium-oxide-asbestos catalyst. All three elements -- carbon, hydrogen, and phosphorus -- were simultaneously determined in this experiment. According to obtained results, the analysis for carbon and hydrogen is within the limits of conventional accuracy, the accuracy for phosphorus is somewhat lower but it is hoped that this simultaneous C, H and P-determination method will be improved. Four references; 3 USSR since 1947. Table

Institution : Acad. of Scs. USSR, The N. D. Zelinskiy Institute of Org. Chem

Presented by : Academician A. N. Nesmeyanov, February 24, 1954

KLIMOVA, V.A.

JOURNAL ARTICLE TRANSLATION

Transl. No. & Country	Translations Issued By R. A. E.	Author
512 U.S.S.R.	Rapid Methods of Microelementary Analysis: 3.-Determination of C and H in Nitrocompounds without using Lead Peroxide Zh. anal. Khim., 4 (5), 292-297, Feb., 1955	M. O. Korshun V. A. Klimova

Source: Index Aeronauticus, Vol. 11, No. 6, p 133, June 1955

Klimova, V.A.

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5060

✓ Determination of fluorine in organic compounds. M. O. Korshun, V. A. Klimova, and N. N. Chumachenko. J. Anal. Chem. U.S.S.R. 10, 347-52(1955)(Eng. translation). B. M. R.
See C.A. 50, 7657h

Klimova, V.A.

USSR/ Analytical Chemistry - Analysis of Organic Substances G-3

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 12141

Author : Korshun M.O., Klimova V.A., Chumachenko M.N.
Title : Determination of Fluorine in Organic Compounds. (11).

Orig Pub : Zh. analit. khimii, 1955, 10, No 6, 358-363

Abstract : Description of a semi-micro method for determination of F in organic compounds, which is based on heating the substance with metallic K in a steel micro-bomb at 800-850° and titrating the thus obtained F^- with a solution of $Th(NO_3)_4$. Presence of N, S, and halogens does not interfere with the titration. Shown is the possibility of simultaneous determination of F and Cl, and the procedure is described for the determination of F in the presence of P. Communication 10, see RZhKhim, 1957, 4823.

Card 1/1

KLIMOVA, V. A.

Rapid methods of microelementary analysis. II. Simultaneous determination of carbon, hydrogen, and silicon in silicon organic compounds. [illegible]

[illegible]ordina, and B. G. Berezovskaya.
[illegible] Chem. [illegible]
[illegible]

[illegible]

which forms part of [illegible]

[illegible] decompd. in one part of the tube at [illegible] and oxidized in another at 900-50°. C and H oxidized to CO_2 and H_2O resp., are trapped in appropriate absorption [illegible] oxidized to SiO_2 remains in the quartz container. [illegible] Si org. compds. were analyzed with errors not exceeding ±0.3% for C and H and ±0.1% for Si. M. Hoch

Klimova, V.A.

1341 Rapid methods of micro elementary analysis. XII. Simultaneous determination [illegible] hydrogen, silicon and halogens

[illegible]

KLIMOVA, V.A.

546\. **Rapid methods of micro-elementary analysis XIII. Simultaneous determination of carbon, hydrogen, silicon and sulphur in sulphur-containing organosilicon compounds.** V. A. K[illegible] and [illegible] Berezinitskaya (N. D. Zelinskii Inst. of Organic Chem., Moscow). Zhur. Anal. Khim. [illegible] 12 (3) 424-425.—The methods previously [illegible] Klimova et al. Anal. Abstr. 1956 3 2063 [illegible] 1957 4 1841 and [illegible] Abstr. [illegible] 1955 [illegible] are [illegible] simultaneous determinations of C, H, Si and S in organosilicon compounds. G. S. Sm[illegible]

2d

E-3

AUTHORS: Klimova, V. A., Dubinina, I. F. 62-2-1-/28

TITLE: A New Variant of the Method of Nitrogen Determination According to Dumas (Novyy variant metoda opredeleniya azota po Dyuma).

PERIODICAL: Izvestiya AN SSSR Otdeleniye Khimicheskikh Nauk, 1958, Nr 2, pp. 129-132 (USSR).

ABSTRACT: In the employment of the above-mentioned method the quantitative oxidation of the compound to be investigated is indispensable, so that the entire nitrogen (elementary) can be obtained at the same time. A nitrogen determination in nitryls, nitrates of silver and alkaline metals is, however, not possible in this way. But it is possible to obtain not quite reliable results by means of analyses of the nitro-compounds with a higher number of nitro-groups, heterocyclic compounds, as well as compounds with the system of condensed rings, with angular methyl-groups, methylated amines and others. Some modifications of the micromethod (according to Dumas) were recently suggested for the purpose of determining the nitrogen in the respective compounds. Almost all of these methods are, however, characterized by considerably more complicated

Card 1/3

A New Variant of the Method of Nitrogen Determination According to Dumas.

62-2-1/28

apparatus (and more complicated technique). They do not furnish reliable data. By the authors' opinion the reason for those failures lies in the method of the combustion of the substance during the analysis of a number of nitrogenous compounds. Marten in his interesting paper reports on a new method. The author suggests not to fill part of the tube. Into the empty part of the combustion tube a small glass is placed which contains a weighed portion covered with a layer of copper oxide. The combustion takes place in the small glass by gradually moving the burner from the open end of the glass toward its closed part (see figure and table). The present paper now gives a new modification of the micromethod according to Dyuma (Dumas). It was found that in the combustion process in the small glass on removal of the sample a refilling of the combustion tube is not absolutely necessary (except in a thin layer of hopkalyth), as a comparatively short zone of filling which is placed in the small glass is sufficient for the complete oxidation of the compound and the reduction of the oxides. It was further shown that by means of the suggested method good results of analysis can be obtained (with an accuracy of ±0,2%). This also applies to slow-burning

Card 2/3

A New Variant of the Method of Nitrogen Determination According to Dumas. 62-2-1/28

compounds.
There are 1 figure, 1 table, and 6 references.

ASSOCIATION: Institute for Organic Chemistry imeni N. D. Zelinskiy AN USSR (Institut organicheskoy khimii imeni N. D. Zelinskogo Akademii nauk SSSR).

SUBMITTED: January 18, 1957

AVAILABLE: Library of Congress

1. **Nitrogen-Determination**

Card 3/3

AUTHORS: Klimova, V. A., Anisimova, G. F. 62-58-6-30/37

TITLE: The Simultaneous Determination of Carbon, Hydrogen and Nitrogen (Odnovremennoye opredeleniye ugleroda, vodoroda i azota)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1958, Nr 6, pp. 791 - 792 (USSR)

ABSTRACT: Besides carbon and hydrogen, nitrogen belongs to those elements which must be determined most frequently in the analysis of organic compounds. The authors suggest a new method which they developed for the purpose of simultaneously determining carbon, hydrogen and nitrogen by means of the pyrolytic decomposition of organic substances in the oxygen current (in an empty tube). Carbon and hydrogen can be determined as before, but nitrogen is determined according to the sum of the oxides formed and of elementary nitrogen. There are 1 table and 5 references, 4 of which are Soviet.

Card 1/2

The Simultaneous Determination of Carbon, Hydrogen and Nitrogen SOV/62-58-6-30/37

ASSOCIATION: Institut organicheskoy khimii im. N.D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N.D.Zelinskiy, AS USSR)

SUBMITTED: February 14, 1958

1. Carbon--Determination 2. Hydrogen--Determination 3. Nitrogen --Determination 4. Organic compounds--Analysis

Card 2/2

5(3) SOV/62-59-1-34/38

AUTHORS: Klimova, V. A., Zabrodina, K. S.

TITLE: Microdetermination of the Carbonyl Group by the Oximation Method (Mikroopredeleniye karbonil'noy gruppy metodom oksimirovaniya)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 1, pp 175 - 176 (USSR)

ABSTRACT: The method of microdetermination suggested in this communication is based on the oximation with hydroxylamine hydrochloride in the presence of triethanol amine by which the hydrochloric acid separated in the reaction is neutralised. The excess of triethanol amine is determined by titration with hydrochloric acid. Bromophenol blue is used as an indicator. In order to determine the end of titration more precisely sodium chloride solution is added. The method can be applied for the determination of aldehydes and ketones which in addition to the carbonyl group possess also methylene groups with mobile hydrogen. This method has an accuracy of ± 0.3%. There are 1 table and 4 references.

Card 1/2

Microdetermination of the Carbonyl Group by the Oximation Method SOV/62-59-1-34/38

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: June 20, 1958

Card 2/2