

ALIMOV, O.D.; BASOV, I.G.; ZELINGER, F.F.; YUDIN, V.G.

Trenching in frozen ground with earthcutting machines
and excavators. Stroi. truboprov. 8 no.8:18-19 Ag '63.
(MIRA 16:11)

1. Tonskiy politekhnicheskii institut.

ALIMOV, O.D., doktor tekhn. nauk; BASOV, I.G., kand. tekhn. nauk

Earth-cutting equipment mounted on the base of ETU-353 excavators.
Mekh. stroi. 20 no.9:24-26 S '63. (MIRA 16:10)

(Excavating machinery)

ALIMOV, O. D.; BASOV, I. G.; MALIKOV, D. N.; LISOVSKIY, E. I.

Results of trials performed by a test crew on the RUP-2 coal
chute widener. Ugol' 38 no.4:41-43 Ap '63. (MIRA 16:4)

(Coal mining machinery—Testing)

USHAKOV, I.A.; ALIKIN, Yu.K.; ALIMOV, O.D.; MALIKOV, D.N.;
SOKOLOV, I.A.; NEYANIN, S.D.

Way of erecting supports in upraise shafts. Ugol' 38
no.12:53-54 '63. (MIRA 17:5)

ALIMOV, O.D.; DOZMAROV, V.Z.

Creation of a bore hoisting machine on the basis of the
UP-3 machine. Ugol' 38 no.12:57 '63. (MIRA 17:5)

1. Tomskiy politekhnicheskii institut.

ALIMOV, O.D., doktor tekhn.nauk; SADAKOV, Yu.P., Inzh.; SHMIDT, A.A., Inzh.;
YUDIN, V.G., Inzh.

Cutting-bar machine with a hydromechanical reducing gear for working
frozen grounds. Stroi. i dor. mash. 9 no.12:4-5 D '64.

(MIRA 18:3)

ALIMOV, O.D., sektor tekhn. nauk

Bar-type earth-cutting machines on a trench-excavator base.
Stroi. i dor. mash. 10 no.6:1-3 Je '65. (MIRA 18:8)

ALIMOV, O.D.; ALIMOVA, A.A.; DVORNIKOV, L.T.

Investigating hole drilling conditions with the use of nomograms.
Fiz.-tekhn. probl. razrab. pol. iskop. no.4:81-84 '65.

(MIRA 19:1)

1. Institut gornogo dela Sibirskogo otdeleniya AN SSSR, Novosibirsk
i Tomskiy politekhnicheskii institut. Submitted April 15, 1965.

~~ALIMOV, O.D.~~, doktor tekhn. nauk; BASOV, I.G., kand. tekhn. nauk;
ZELINGER, F.F., inzh.

Experimental investigation of cutting conditions of frozen
grounds with an earth-digging machine. Stroi. i dor. mash.
10 no.9:1-4 S '65. (MIRA 18:10)

ALINOV, P.

Centennial of the "Veliko-Anadol'skii" Forestry School. Les. khoz. no. 1, 1952.

SO: MLRA, September 1952

ALIMOV, P.A.

MAL'TSEV, A.M.; ALIMOV, P.A., redaktor; YEREMENKO, V.Ye., redaktor; ZAKIROV, K.Z., akademik, redaktor; KANASH, S.S., akademik, redaktor; KOROVIN, Ye.P., akademik, redaktor; MUKHAMEDZHANOV, M.V., akademik, redaktor; NABIYEV, M.N., akademik, redaktor; RYZHOV, S.N., redaktor; SADYKOV, S.S., redaktor; UZENBAYEV, Ye.Kh., doktor sel'skokhozyaystvennykh nauk, redaktor; MIL'MAN, Z.A., redaktor izdatel'stva; BARAKHANOVA, A.G., tekhnicheskii redaktor

[The cotton plant] Khlopchatnik. Tashkent, Izd-vo Akademii nauk Uzbekakol SSR. [Introductory volume: The cotton plant and the use of its fiber] Vvedenie: Khlopchatnik i ispol'zovanie volokna. 1956. 128 p. (MLA 10:3)

1. Tashkent. Vsesoyuznyy nauchno-issledovatel'skiy institut khlopkovodstva. 2. Chlen-korrespondent Akademii nauk UzSSR (for Alimov, Yermenko, Mal'tsev, Sadykov, Kanash). 3. Vsesoyuznaya Akademiya sel'skokhozyaystvennykh nauk im. Lenina (for Kanash). 4. Chlen-korrespondent Vsesoyuznoy Akademii sel'skokhozyaystvennykh nauk im. Lenina (for Ryzhov)
(Cotton)

ALIMOV, P. I.

183T9

USSR/Chemistry - Organophosphorus Compounds May/Jun 51

"Action of Strong Inorganic Acids on Some Esters of Phosphorus Acids," A. Ye. Arbuzov, P. I. Alimov, Chem Inst imeni Acad A. Ye. Arbuzov, Kazan' Affiliate, Acad Sci USSR

"Iz Ak Nauk SSSR, Otdel Khim Nauk," No 3, pp 268-272

Sulfuric or phosphoric acid, similarly to HCl, splits triethylphosphite into diethylphosphorous acid and ethyl ester of the inorganic acid. Action of HCl on tetraethyl pyrophosphite results in formation of diethylphosphorous acid and diethylphosphorous acid

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USSR/Chemistry - Organophosphorus Compounds (Contd) May/Jun 51

chloride. Action of HCl on tetraethyl hypophosphate results either in formation of diethylphosphoric acid chloride (I) and diethylphosphorous acid (II) or of diethylphosphoric acid (III) and diethylphosphorous acid chloride (IV). Following products of this reaction were isolated: II, IV, and tetraethyl pyrophosphate (V). V is product of secondary reaction between I and III.

LC

183T9

ALIMOV, P. I.

PA 192T21

USSR/Chemistry - Organophosphorus
Compounds

Jul/Aug 51

"Combined Anhydrides of Carboxylic Acids and Diethylphosphorous Acid," A. Ye. Arbuzov, P. I. Alimov, Chem Inst Imeni Acad A. Ye. Arbuzov, Kazan' Affiliate, Acad Sci USSR

"Iz Ak Nauk SSSR, Otdel Khim Nauk" No 4,
pp 409-416

Action of isobutyric, butyric, isovaleric, crotonic, capronic, benzoic, p-toluylic acids on (EtO)₂P-O-P(EtO)₂ yielded combined anhydrides of type RCOOP(OR)₂ prep'd for the 1st time, which

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USSR/Chemistry - Organophosphorus
Compounds (Contd)

Jul/Aug 51

react in the manner of acid anhydrides. Under action of EtI, they form by Arbuzov reaction isomers contg P5+ atom (phosphonic acid-carboxylic acid anhydrides) and high-boiling substances of undet'd structure.

192T21

A. ALIMOV, P. I.

Organic Chemistry - 10

Products of condensation of esters of pyrophosphorous acid with aldehydes. A. B. Arbusov and P. I. Alimov (A. F. Arbusov Chem. Inst., Kazan). *Izv. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1951, 600-6. — Analogously to formation of diacyl derivatives from aldehydes with carboxylic anhydrides, aldehydes with $[(RO)_2P]_2O$ form compounds of the general type $(RO)_2P(O)CH(R)P(O)(OR)_2$. Thus, heating 4 g. AcH and 14.1 g. $[(RO)_2P]_2O$ (I) in a sealed tube 1 hr. at 110° gave 8.2 g. $(EO)_2P(O)CHMeP(O)(OE)_2$ (II), b.p. $100-101^\circ$, n_D^{20} 1.4383, d_4^{20} 1.1001, sol. in org. solvents and H_2O . To 0.2 g. I and 1.75 g. $PhCHO$ was added 1 drop H_2SO_4 , which caused a temp. rise to 37° , and after 10 min. at 100° the mixt. gave 3 g. $(EO)_2P(O)CHPhP(O)(OE)_2$ (III), b.p. $134-5^\circ$, n_D^{20} 1.4390, d_4^{20} 1.1078. Heating 7.4 g. I with 2.75 g. furfural 40 min. at 120° gave about 2 distils. 1.3 g. $(EO)_2P(O)CH-(C_4H_7O)_2P(O)(OE)_2$, b.p. $146-8^\circ$, n_D^{20} 1.4067, d_4^{20} 1.1000. Similarly 7.5 g. I with 3.1 g. BzH 1 hr. at 12° gave 4.7 g. $(EO)_2P(O)CHPhP(O)(OE)_2$, b.p. $149-50^\circ$, n_D^{20} 1.4865, d_4^{20} 1.1315, sol. in slightly acidified H_2O . p -MeC₆H₄CHO gave the p -tolyl analog, b.p. $150-151^\circ$, n_D^{20} 1.4894, d_4^{20} 1.1158. On slow addn. of 2.5 g. Cl_3CCHO to 7.5 g. I heat was evolved (temp. rise to 65°) and after 10 min. at $100-20^\circ$ were obtained 2.5 g. (after several distils.) $(EO)_2P(O)C(Cl)_3$, b.p. $41-3^\circ$, and 3.5 g. $(EO)_2P(O)C(CH_3)_3$, b.p. $127-8^\circ$, n_D^{20} 1.4489, d_4^{20}

1.2081, indicating an anomalous reaction course. The latter product was also obtained, a proof of its structure, in 7.2 g. yield by slow addn. of 7.4 g. $[(RO)_2P]_2O$ to 0.9 g. Cl_3CCHO , followed by heating 10 min. at $120-40^\circ$; the product b.p. $120-7^\circ$, n_D^{20} 1.4490, d_4^{20} 1.2001. No reaction took place between this product and I. I also failed to react with Me_2CO . II boiled 8 hrs. with 10% HCl, then briefly with $HgCl_2$, gave 95.20% $HgCl_2$. Similarly the $(EtO)_2P(O)CHPhP(O)(OE)_2$ (III) gave 98.4% $HgCl_2$; hydrolysis of the BzH deriv. 0 hrs. at reflux with 30% HCl, followed by repeated evapn. with H_2O , addn. of the residue in H_2O , evapn., and crystn. from AcOH- $CaCl_2$, gave $PhCH(OH)P(O)(OH)_2$, m. $172-3^\circ$, confirming the structure. Heating II (5.1 g.) with 1 ml. BzH in a sealed tube 4 hrs. at 140° gave 3 g. $(EO)_2P(O)CHMeOP(O)(OE)_2$, b.p. $132-3^\circ$, n_D^{20} 1.4390, d_4^{20} 1.1256, sol. in org. solvents and H_2O . Similarly III in 2 hrs. at $120-45^\circ$ gave $(EO)_2P(O)CHPhOP(O)(OE)_2$, b.p. $170-7^\circ$, n_D^{20} 1.4994, d_4^{20} 1.1624, in almost 100% yield. II reacts with $(CuNH_4)$ with evolution of heat, but the adducts could not be isolated. G. M. K.

L 35099-65 EWT(m)/EWP(j)/EP(c) PC-4/Pr-4 CRM

ACCESSION NR: AP5001871

UR/0062/64/000/010/1889/1892

AUTHOR: Alimov, P. I.; Levkova, L. N.

TITLE: Derivatives of the methyleneamide of diethylphosphoric acids

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 10, 1964, 1889-1892

TOPIC TAGS: phosphoric acid, organic amide, chlorinated organic compound, organic phosphorus compound

Abstract: The reactions of dichloromethyleneamide of diethylphosphoric acid with ethyl- and dimethylamines, aniline, methanol ethanol, and propyl and butyl mercaptans were investigated. Dialkoxymethyleneamides of diethylphosphoric acid were prepared by reaction with sodium alcoholates or alcohols in the presence of tertiary amine. The exchange of chlorine atoms for alkoxyl groups proceeded better with alcoholates than with alcohols. The action of aliphatic or aromatic amines on the dichloride produced N-diethylphosphoryl-N',N''-alkyl(phenyl) guanidines. Mixed derivatives of the methyleneamide of diethylphosphoric acid, containing thioalkyl or ethoxyl and dimethylamino groups on the carbon atom were also synthesized.

Orig. art. has: 9 formulas, 1 table.

Card 1/2

L 31099-65

ACCESSION NR: AP5009871

ASSOCIATION: Khimicheskiy institut im. A. Ye. Arbuzova Akademii nauk SSSR (Chemical Institute, Academy of Sciences SSSR)

SUBMITTED: 28Feb64

ENCL: 00

SUB CODE: 00 00

NO FEE SOV: 001

OTHER: 000

JPRS

Card 2/2

ALIMOV, P. I.

ARBUZOV, A.Ye.; ALIMOV, P.I.

Condensation products of pyrophosphorous acid esters with
aldehydes. Izv. Kazan. fil. AN SSSR Ser. Khim. nauk no. 1: 21-30
'50. (MLRA 10:5)
(Pyrophosphorous acid) (Aldehydes)

ALIMOV, P.I.

ARBUZOV, A.Ye.; ALIMOV, P.I.

Effect of strong mineral acids on certain phosphorus acid esters.
Izv.Kazan.fil.AN SSSR Ser.khim.nauk no.1:39-44 '50. (MLRA 10:5)
(Phosphorus acids)

Alimov, P.I.

V Synthesis of some organic derivatives of telopropene
A. Arbuzov, P. I. Alimov, M. A. Zvereva,
I. D. Nizovskiy, and H. A. Koshkin, *Bull. Acad. Sci. USSR Div. Chem. Sci.* 1954, 406-7 (Rus. translation);
See C.A. 49, 115. B. M. R.

(4)

ALIMOV, P. I.

USER/ Chemistry - Insecticides

Card 1/2 Pub. 40 - 13/27

Authors : Arbuzov, B. A.; Alimov, P. I.; Zvereva, M. A.; Neklesova, I. D.; and
Kurdina, M. A.

Title : Synthesis of certain organic derivatives of thiopyrophosphoric acid

Periodical : Izv. AN SSSR. Otd. khim. nauk 6, 1038-1041, Nov-Dec 1954

Abstract : Experiments were conducted for the purpose of obtaining new insecticides
of the thiopyrophosphoric acid series. Diethylthiophosphoric acid was
synthesized by adding sulfur to diethylphosphorous acid in the presence
of three different amines (triethylamine, pyridine and diethylaniline)-

Institution : Acad. of Sc., USSR, Kazan Branch, The A. E. Arbuzov Chemical Institute

Submitted : January 16, 1954

Periodical : Izv. Akad. Nauk SSSR, Otd. Khim. nauk 6, 1038-1041, Nov-Dec 1954

Card 2/2 Pub. 40 - 13/27

Abstract : The synthesis of ethyl ethers, mixed alkyl ethers and ether-amides of monothio- and dithiopyrophosphoric acid is described. The effectiveness of the insecticide was tested on various small animals and the results are listed. Two references: 1 USSR and 1 USA (1951 and 1953). Tables.

ALIMOV, P. I.

USSR/ Chemistry - Synthesis

Card 1/1 Pub. 40 - 14/27

Authors : Arbuzov, B. A.; Alimov, P. I.; and Zvereva, M. A.

Title : Synthesis of certain N-substituted amides of diethylphosphoric acid

Periodical : Izv. AN SSSR. Otd. khim. nauk 6, 1042-1046, Nov-Dec 1954

Abstract : Two methods are described for the synthesis of amides of diethylphosphoric and diethylphosphorous acids in which the hydrogens of the amide group are replaced by different acid radicals. The derivation of certain N-substituted amides of diethylphosphoric acid from the reaction of halides with sodium derivatives of methylamide of diethylphosphoric acid is announced. The physico-chemical characteristics of the amides are listed. Two references: 1 USA and 1 German (1910-1950). Table

Institution : Acad. of Sc., USSR, Kazan Branch, The A. E. Arbuzov Chemical Institute

Submitted : January 16, 1954

ALIMOV, P. I.

USSR/Chemistry - Synthesis

Card 1/1 Pub. 40 - 15/27

Authors : Arbuzov, B. A.; Alimov, P. I.; Zvereva, M. A.; Neklesov, I. D.; and
Kurdina, M. A.

Title : Synthesis of amides of organic phosphoric acid derivatives

Periodical : Izv. Akad. Nauk SSSR, Otd. Khim. Nauk 6, 1047-1052, Nov-Dec 1951.

Abstract : The derivation of numerous organo-phosphorous compounds is announced and some of their physico-chemical properties are described. A thorough analysis of these organophosphorous derivatives revealed together with their highly insecticide qualities and effectiveness in combatting many agricultural pests. One USSR reference (1953). Table.

Institution : Acad. of Sc., USSR, Kazan Branch, The A. E. Arbuzov Chemical Instit.

Submitted : January 16, 1951.

Alimov, P. I.

USSR/ Chemistry - Organic chemistry

Card 1/1 Pub. 40 - 8/26

Authors : Arbuzov, B. A., and Alimov, P. I.

Title : Products obtained from reaction of sodium salts of diethylthiophosphoric acid with alkoxydichlorophosphines

Periodical : Izv. AN SSSR, Otd. khim. nauk 2, 249 - 252, Mar-Apr 1955

Abstract : Data are presented regarding the derivation and certain properties of acid esters which appear to be anhydrides with two molecules of monothiorphosphoric acid and one molecule of phosphorous acid. The derivation of esters of the general formula $ROF[OS(OC_2H_5)_2]$ through the reaction of sodium salts of diethylthiophosphoric acid with alkoxydichlorophosphines is described. Table.

Institution : Acad. of Sc., USSR, Kazan Branch, The A. Ye. Arbuzov Chemistry Inst.

Submitted : January 15, 1954

Alimov, P. I.

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Some derivatives of α -hydroxyalkylphosphonic acids.
P. I. Alimov and G. N. Fedorova. *Bull. Acad. Sci. U.S.S.R.*
Chem. Sci. 1953, 761-7 (Engl. translation).
See C.A. 50, 1281d. B. M. R.

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PM

ALIMOV, P. I.

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Some derivatives of α -hydroxyalkylphosphonic acids, P. I. Alimov and O. N. Fedorova (A. R. Arbuzov Chem. Inst., Acad. Nauk S.S.S.R., Otdel. Khim. Nauk 10:5, 844-51; cf. C.A. 47, 86g.—[In the following compds. R = $P(O)(OEt)_2$ and the data are given in the order % yield, b.p./mm., n_D^{20} , and d_4^{20}]. $(EtO)_2P(O)CMe_2OH$ (18.8 g.), 9.7 g. Et_3N , and petr. ether treated at room temp. with 15 g. $(EtO)_2PCl$, and the mixt. heated 1 hr. at $60-65^\circ$, cooled, filtered, and distd. yielded $(EtO)_2POCHMe_2R$ (1), 63.1; $106-7^\circ/0.5$, 1.4370, 1.0762. This (7.3 g.) heated with 3.9 g. $EtOCCHEtBr$ 45 min. to 130° gave Et_3Br and $EtO_2CCH_2P(O)(OEt)OCMe_2R$, 47.66, $109-70.6^\circ/1$, 1.4460, 1.1570; a similar reaction with EtI in a sealed tube at $135-40^\circ$ gave in 4 hrs. $EtP(O)(OEt)OCMe_2R$, 60.0, $140-1.5^\circ/2$, 1.4395, 1.1165. I (8 g.) in C_6H_6 with 0.81 g. S reacted exothermically and the mixt. heated at $50-90^\circ$ until the S dissolved gave $(EtO)_2P(S)OCMe_2R$, 56.7, b.p. $145-6^\circ/1.6$, 1.4570, 1.1419. The same method was used for the prepn. of: $(EtO)_2POCHMe_2R$, 78.12, $109-10^\circ/1$, $109-10^\circ$ [in another part of this paper this is given $117.5-118.5^\circ/1$], 1.4370, 1.0925; $(PrO)_2POCHMe_2R$, 50.49, $120-80^\circ/1$, 1.4305, 1.0610; 40.65% $(PrO)_2POCHMe_2R$, 40.65, $136.5-8^\circ/1.5$, 1.4435, 1.0570; $(iso-BuO)_2POCHMe_2R$, 52.25, $128-8.5^\circ/1$, 1.4372, 1.0345; $(iso-BuO)_2POCHMe_2R$, 48.12, $130-7^\circ/1$, 1.4390, 1.0377; $EtO_2CCH_2P(O)(OEt)OCMe_2R$, 54.5, $170-1.5^\circ/1$, 1.4425, 1.1761; $EtP(O)(OEt)OCMe_2R$, 81, $141.5-3^\circ/1$, 1.4370, 1.1295; $PrP(O)(OPr)OCMe_2R$, 37.5, $140-2^\circ/0.5$, 1.4388, 1.0870; $(EtO)_2P(S)OCMe_2R$, —, $145-6^\circ/1$, 1.4561, 1.1526; $(PrO)_2P(S)OCMe_2R$, 75.6, $156-7^\circ/1$, 1.4550, 1.1166; $(PrO)_2P(S)OCMe_2R$, 38.7, b.p. $161-2^\circ/1$, 1.4598, 1.1017; $(iso-BuO)_2P(S)OCMe_2R$, 65.20, $161-2.5^\circ/1$, 1.4525, 1.0843. O. M. Kosolapoff.

Chem

RM 80

Alimov, P. I.

5

Synthesis of alkyl bis(alkyl) diethyphosphonophosphites.
P. I. Alimov and I. V. Chepurova (A. B. Arkharov Chem. Inst., Kazan). *Izv. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1953, 1015-20. To 26 g. HOCHMePO(OEt)_2 , 14.4 g. Et_3N , and 180 ml. pet. ether was added 10.5 g. HClPCl_2 ; after 2 hrs. at $50-55^\circ$, the mixt. filtered and distd., yielded 38.9% $\text{EtOP(OCHMePO(OEt)}_2)_2$ (I), b.p. $162-4^\circ$, n_D^{20} 1.4410, d_4^{20} 1.1579. Thus prepd. were (yield, b.p., n_D^{20} , d_4^{20} given): $\text{PrOP(OCHMePO(OEt)}_2)_2$, 33.8%, b.p. $107-8^\circ$, n_D^{20} 1.4477, d_4^{20} 1.1474; $\text{MeOP(OCHMePO(OEt)}_2)_2$, 20.7%, b.p. $172-3^\circ$, n_D^{20} 1.4505, d_4^{20} 1.1502; $\text{EtOP(OCHMePO(OEt)}_2)_2$ (II) 34%, b.p. $172-3^\circ$, n_D^{20} 1.4500, d_4^{20} 1.1570; $\text{EtOP(OCHMeIPO(OEt)}_2)_2$, 9.9%, b.p. $181-3^\circ$, n_D^{20} 1.4502, d_4^{20} 1.1303; $\text{PrOP(OCHMeIPO(OEt)}_2)_2$ (III), 59.1%, b.p. $175-6^\circ$, n_D^{20} 1.4404, d_4^{20} 1.1243. I heated with S to 110° gave $\text{C}_4\text{H}_{10}\text{P}_2\text{O}_5$, d_4^{20} 1.1037, n_D^{20} 1.4585. II reacted with CaI_2 at 150° to yield a viscous soln. III heated 6.5 hrs. with 10% HCl yielded 99% HgCl_2 after treatment with HCl .
G. M. Kosolapoff

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L. M. Lopez et al.

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ALIMOV ~~et al.~~ P. I.

"Esters and Ester Amides of Phosphoric, Thiopyrosphoric,
and Dithiotriphosphoric Acids and Some of Their Properties"
paper presented at Nn First Conference on Phosphorous Compounds, Kazan,
8-10 Dec 56

SO: B-3,084,841

ALIMOV, P.I.

7
Alky amides of organic derivatives of acids of phosphorus
B. I. Alimov, P. I. Alimov, and G. N. Fedorova. Bull.
Acad. Sci. U.S.S.R. Div. Chem. Sci. 1964 110 67 English
translation. See C 4 21 60122

275
454

am / 0006

A1: mov, P.I.

Alkyltinides of organic derivatives of acids of phosphorus

B. A. Alimov, P. I. Alimov, and O. N. Polovoy (A. E.

Arbuzov, Chuv. Inst. Kazan)

Me. by ... added with ... (PO)₂POCl₂ after 1 hr. at 55-65° and standing overnight, the filtered soln. was distd. yielding 82.4% crude product, which gave 14.2 g. pure MeN[PO(OPr)₂]₂, b_p 159-60°, n_D²⁰ 1.4315, d₄²⁰ 1.0867 (n_D²⁰ were also used below). Similarly were prepd.: 49.81% MeN[PO(OCH₂Me)₂]₂, b_p 128-9°, 1.4292, 1.0884, 51.00% MeN[PO(OPr)₂]₂, b_p 160-1°, 1.4385, 1.0740, 58.00% MeN[PO(OCH₂Me)₂]₂, b_p 130-30°, 1.4288, 1.0612, 54.18% MeN[PO(OCH₂Me)₂]₂, b_p 132-3°, 1.4375, 1.0375, 45.67% MeN[PO(OCH₂Me)₂]₂, b_p 173-4°, 1.4411, 1.0368, 50.45% MeN[PO(OCH₂Me)₂]₂, b_p 157-8°, 1.4370, d₄²⁰ 1.0710, 50.00% MeN[PO(OCH₂Me)₂]₂, b_p 140-2°, 1.4560, 1.1214, 30.35% MeN[PO(OCH₂Me)₂]₂, b_p 134-5°, 1.4940, 1.1662, 8% EtN[PS(OEt)₂]₂, b_p 133-4°, 1.4813, 1.1470. These compds. showed very weak insecticidal activity on the barn weevil. Reaction of 10 g. (iso-PrO)₂POCl₂ with Na deriv. from 16.9 g. (iso-PrO)₂PONHMe and 1.28 g. Na in ligroine gave 91.3% crude and 44.8% pure (iso-PrO)₂P(O)NMeP(O)(OCH₂Me)₂ (Ja), b_p 107-9°, 1.4330, 1.0179. Similarly were prepd.: 43.4% (EtO)₂P(O)NMeP(O)(OEt)₂, b_p 104-6°, 1.4435, 1.1045; 40% (PrO)₂P(O)NMeP(O)(OPr)₂, b_p 126-7°, 1.4405, 1.0213. Heating 7 g. I and 1 ml. Et₃N in a sealed tube 6 hrs. at 120-30° gave 64.3% (EtO)₂P(O)NMeP(O)Et(OEt)₂, b_p 132-3°, 1.4450, 1.1304. Reaction with BrCH₂CO₂H in 1 hr. at 120-30° similarly gave 87.1% (EtO)₂P(O)NMeP(O)(OEt)CH₂CO₂Et, b_p 101-3°, 1.4491, 1.1878; addn. of 4.7 g. CCl₃CHO to 0.18 g. I gave spontaneous reaction which yielded 65.5% (EtO)₂P(O)NMeP(O)(OEt)OCH₂CCl₃, b_p 163-3°, 1.4608, 1.3077. Heating 6.0 g. Ia and 0.52 g. S in benzene 20 min. gave 64.02% (iso-PrO)₂P(O)NMeP(S)(OCH₂Me)₂, b_p 120-7.5°, 1.4535, 1.0730. Similarly was prepd.: (PrO)₂P(O)NMeP(S)(OPr)₂, b_p 142-4°, 1.4570, 1.7014 (sh). G. M. K.

Any further use of esters of α -hydroxyphosphonals
 by P. I. Abramov and I. V. Chepurova (A. E. Abramov
 Chem. Zvezd., Kazan. Invest. Akad. Nauk S.S.S.R.,
 Dokl. Akad. Nauk 1956, 939-942, cl. C.A. 50, 11232d.
 To 17 g. $PrCH(OH)PO(OEt)_2$ (b, 141-2°) and 8.2 g.
 Et_3N in 150 ml. ligroine was added dropwise 6.4 g. $AcCl$
 and the mixt. kept 1 hr. at 65-70° to give after filtra- and
 distn. 100% crude product or 40.9% pure $PrCH(OAc)PO-$
 $(OEt)_2$ (b, 111-12°, n_D 1.4312, d₄ 1.0649, Refluxing this

with 10% NaOH 1 hr. gave after acidification and evapn. a
 theoretical amount of $AcOH$ in the distillate; the P-const.
 portion apparently undergoes further degradation in hy-
 drolysis (cf. Abramov, et al., C.I. 47, 3227). Similarly
 were prepd.: 70.8% $MeCH(OAc)PO(OEt)_2$, b_p 93-3.5°,
 1.4271, 1.1083; 55.8% $PrCH(OAc)PO(OEt)_2$, b_p 158-
 61°, 1.4917, 1.1640; $p-MeC_6H_4CH(OAc)PO(OEt)_2$, b_p
 158-6°, 1.4933, 1.1833. Heating 8.77 g. $(EtO)_2P(O)OEt$
 and 2.04 g. $AcOH$, 10 min. at 101-18°, followed by addn.
 to the thus-formed mixed anhydride of 2.45 g. $PrCHO$ and
 heating 45 min. to 130-40°, gave 25.0% product, b_p 125-
 8°, 1.4318, 1.0573, analyzed as $C_{17}H_{25}PO_5$ and contg. 12.6%
 AcO groups. To 13.8 g. $(EtO)_2P(O)OH$ and 9.6 g. furfural
 was added few drops of satd. $MeONa-MeOH$ and the mixt.

heated 1 hr. to 95-100° to give crude $O,CH:CH,CH:CH-CH-$
 $(OH)P(O)(OEt)_2$ (I), which in 150 ml. ligroine was treated
 with 10.1 g. Et_3N followed by dropwise addn. of 10.85 g. iso-
 $PrCOCl$; after 1 hr. at 65-70° the mixt. was filtered and
 distd. yielding 67% 1 isobutyrate, b_p 159-1°, 1.4137,
 1.1387. Similarly was prepd. 39.1% 1 acetate, b_p 129-10°,
 1.4094, 1.1940; and 37.5% 1 hexanoate, b_p 150-7°, 1.4140,
 1.1088. The reaction with acyl halides is hindered by
 presence of substituents on the HO-carrying C atom of the
 esters and requires relatively high temps. for completion.
 Heating $MeC(OH)PO(OEt)_2$ with $AcCl$ and Et_3N in
 xylene 13 hrs. at 80-90° gave 43% $MeC(OAc)PO(OEt)_2$
 and the initial ester in a binary mixt. b_p 92-93°

(Phosphinic acid)

Khimicheskoye Sost. im. A. Ye. Arbusova Kazanskogo filiala Akad. Nauk S.S.S.R.

ALIMOV, P. S.

New method of preparation of triethyl phosphite.
A. E. Artyukov, B. A. Artyukov, T. A. Artyukov and A. V. Artyukov. *Tr. Khim. Akad. Nauk S.S.S.R.*, Ser. Khim. Nauk 1950, No. 2, 3-5. Abs. Et₃P (38 g.) was added under the surface of 52 g. POCl₃ at t = -10° with ice cooling and stirring at 15-20 mm. over 2-3 hrs. after the addn. a capillary was inserted into the liquid and a slow stream of air pulled through the mist with continued evacuation to 15-18 mm. for 7 hr. Gradual warming to 120-5° over 1.5-1.6 hr. completed the reaction, yielding crude (38.2%) Et₃P. Vacuum dist. of a 10-g. sample gave 3.5 g. purified product, b. 134-5°, n_D²⁰ 1.4160. If the reaction was completed by addn. of the theoretical amt. of EtOH to POCl₃ and, after the removal of EtCl and HCl to azeo the mixt. was not heated, the yield of ester dropped to 10-14%.
G. M. Korolavov

Phy. anal.

ALIMOV, P. I., ZVEREVA, M. Z., and FEDEROVA, O. N., (A. E. Arbuzov Chemical
Institute of Kazan

"Esters and Ester-Amides of Phosphoric, Thiopyrophosphoric, Dithiotri-
phosphoric Acids and Some of Their Properties," Khimiya i Primenenie
Fosfororganicheskikh Soyedinenii, pp 164-175, 1957

ALIMOV, P. I.

Diethyl thiopyrophosphate. A. B. Arbutov, B. A. Arbutov, P. I. Alimov, and E. V. Medvedev. U.S.S.R. 105,841, 1983, 1986. Na diethyl thiopyrophosphate is made to react with diethyl phosphoric acid HCl. The resulting tetraethyl thiopyrophosphate is used as insecticide.

MT

ALIMOV, P. I.

Sulfur and selenium analogs of tetraethyl pyrophosphate.
A. S. Arshinov, A. A. Arshinov, K. V. Tolstopyanov, and P. I.
Alimov. U.S.S.R. 104,053, June 23, 1967. Et pyrophos-
phate or Et terphosphate is heated with 1 or 2 moles of S
or Se. The S- or Se-contg. analogs of tetraethyl pyro-
phosphate are used as insecticides. M. Hirsch

Handwritten signature and initials

ALIMOV, P. I.; ZVEREVA, M. A.; FEDOROVA, O. N. (Chem. Inst. im. Acad. A. Ye. Arbakov, Kazan Affil. AS USSR)

"Esters and Ester Amides of Phosphoric, Thiopyrophosphoric, Dithiotriphosphoric Acids and Some of Their Properties" (Efiry i efiroamidy fosforney, tiopirofosforrykh, ditiotriposforney kislot i ikh nekotoryye svoystva)

Chemistry and Uses of Organophosphorous Compounds
(Khimiya i primeneniye fosfororganicheskikh soedneniy),
Trudy of First Conference, 8-10 December 1955, Kazan,
pp. Published by Kazan Affil. AS USSR, 1957
164-175

Report discussed by B. E. Shugayev (Minsk State Medical Institute) and K. S. Shadurskiy (Minsk State Medical Institute).

ALIMOV, P.I.; CHEPLANOVA, I.V.

Mono-dichlorovinyl esters of some derivatives of phosphorus
acids and their properties. Izv.Kazan.fil.AN SSSR.Ser.khim.
nauk no.4:43-47 '57. (MIRA 12:5)
(Phosphorus acids) (Insecticides)
(Vinyl compounds)

ALIMOV, P.I.; FEDOROVA, O.N.; CHEPLANOVA, I.V.

Synthesis and properties of some mixed and N-substituted
amides of dialkylphosphoric acids. Izv.Kazan.fil.AN SSSR.Ser.
khim.nauk no.4:49-57 '57. (MIRA 12:5)
(Amides)
(Phosphoric acids)

ALIMOV, P.I.; FEDOROVA, O.N.

Syntheses and properties of some di-N-substituted amidophosphates.
Izv. AN SSSR.Otd. khim. nauk no.11:1985-1990 N '60.

(MIRA 13:11)

1. Khimicheskiy institut im. A.Ye.Arbutova Kazanskogo filiala.
AN SSSR.

(Phosphoric acid)

ALIMOV, P.I.; FEDOROVA, O.N.

Preparation of amides of N-phosphorylated aminocarboxylic acids.
Izv.Kaznan.fil. AN SSSR. Ser.khim.nauk no.6:48-53 '61. (MIRA 16:5)
(Phosphorus organic compounds) (Amides)

ALIMOV, P.I.; CHEPLANOVA, I.V.

Syntheses and properties of some dialkyl, p-chlorophenyl- β -trichloroethyl phosphites, thiophosphites, and phosphines. Izv. Kazan. Fil. AN SSSR. Ser. khim. nauk no. 6: 54-60 '61. (MIRA 10:5)
(Phosphorus organic compounds)

ALIMOV, P.I.; CHEPLANOVA, I.V.

Syntheses of some chlorine organic derivatives of phosphorus acids.
Izv.Kazan.fil. AN SSSR. Ser.khim.nauk no.6:61-67 '61. (MIRA 16:5)
(Phosphorus acids) (Chlorine organic compounds)

ALIKOV, P.I.

Products of the condensation of chloral with organophosphoric
acid amides. Izv. AN SSSR. Otd. khim. nauk no. 1:61-64 Ja '61.
(MIRA 14:2)

1. Khimicheskiy institut im.A.Ye. Arbuzova Karanskogo filiala
AN SSSR.

(Chloral) (Amides)

ALIMOV, P.I., FEDOROVA, O.N., CHEPLANOVA, I.V.

Synthesis of certain substituted amides and mixed esters of phosphorus acids with possible physiological activity.

Khimiya i Primeneniye Fosfororganicheskikh Soedineniy (Chemistry and application of organophosphorus compounds) A. YE. ARBUZOV, Ed.
Publ. by Kazan Affil. Acad. Sci. USSR, Moscow 1962, 632 pp.

Collection of complete papers presented at the 1959 Kazan Conference on Chemistry of Organophosphorus Compounds.

ALIMOV, P.I.; ANTOKHINA, I.A.

Synthesis of some N-sulfen derivatives of diethyl phosphoric acid
amide. Izv. AN SSSR. Otd.khim.nauk no.6:1132-1134 Je '63.
(MIRA 16:7)

1. Kazanskiy khimicheskiy institut imeni A.Ye. Arbuzova AN SSSR.
(Phosphoric acid) (Sulfenamide)

ALIMOV, P.I.; ANTOKHINA, L.A.

Synthesis of N-substituted amides of O,O-aryl alkyl phosphoric and phosphorothioic acids. Izv. AN SSSR, Ser. khim. no.12:2204-2206 D '63. (MIRA 17#1)

1. Khimicheskiy institut im. A.Ye. Arbuzova AN SSSR.

ALIMOV, P.I.; IEVKOVA, L.N.

Esters of mono- and diisothiocyanophosphoric acids and their derivatives. Izv. AN SSSR. Ser.khim. no.1:187-189 Ja '64.

(MIRA 17:4)

1. Khimicheskiy institut im. A.Ye.Arbutova AN SSSR.

ALIMOV, P.I.; LEVKOVA I.N.

Dichloromethylene amides of dialkyl phosphoric acids. Inv.
AN.SSR.Ser.khim. no. 5:932-933 № 164. (MIRA 17:6)

1. Khimicheskii institut im. A.Ye.Arbusova AN SSSR.

ALIMOV, P.I.; ANTOKHINA, L.A.

Derivatives of diethoxyphosphorylamido-N-sulfonic acid. Izv.
AN SSSR Ser. khim. no.7:1316-1317 J1 '64. (MIRA 17:8)

1. Khimicheskiy institut imeni A.Ye. Arbuzova AN SSSR.

ALIMOV, P.I.; LEVKOVA, L.N.

Phosphorylation of formamide. Izv. AN SSSR. Ser. khim. no.10:
1801-1807 O '64.

Derivatives of methyleneamide of diethylphosphoric acid: Ibid.:
1889-1892 (MIRA 17:12)

1. Khimicheskiy institut im. A.Ye. Arbuzova AN SSSR.

L 54186-65 EWA(j)/EWT(m)/EPP(c)/EWP(j)/EWA(b)-2 RM
 ACCESSION NR: AP5019776 UR/0062/65/000/007/1208/1214
 542.91 + 661.718.1

AUTHOR: Alimov, P. I.; Fedorova, O. N.; Levkova, L. N.

TITLE: N-Substituted imides of certain organophosphorus acids

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1965, 1208-1214

TOPIC TAGS: organophosphorus compound, imide, amide, fungicide

ABSTRACT: N-Substituted imides of organophosphorus acids were synthesized by direct reaction between the corresponding acid chlorides and acid amides. Imides with a cyclic radical at the phosphorus atom were synthesized, and some of their properties were studied. The reaction of diethyl chlorophosphite with N-ethyl amide of diethylphosphoric acid and the reaction of diisopropyl chlorophosphate with N-ethyl amide of diisopropylphosphoric acid in the presence of a tertiary amine readily yield the corresponding N-substituted imides of organophosphorus acids. N-methyl imide and N-ethyl imide of diethylphosphoric and ethylene glycolphosphorus acid were prepared, and reactions with sulfur, nitrogen dioxide, ethyl bromide, and chloral were carried out. To study the fungicidal effect, 12 substances were synthesized which

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L 64186-65

ACCESSION NR: AP501976

were N-substituted imides of organophosphorus acids and whose composition included alkyl radicals with two to five carbon atoms. The experimental procedure employed in all the reactions is described. Orig. art. has: 1 table, 9 formulas.

ASSOCIATION: Khimicheskiy institut im. A. Ye. Arbuzova Akademii nauk SSSR (Chemical Institute, Academy of Sciences SSSR)

SUBMITTED: 07Jun63

ENCL: 00

SUB CODE: 00

NO REF SOV: 002

OTHER: 000

Card 2/2 mub

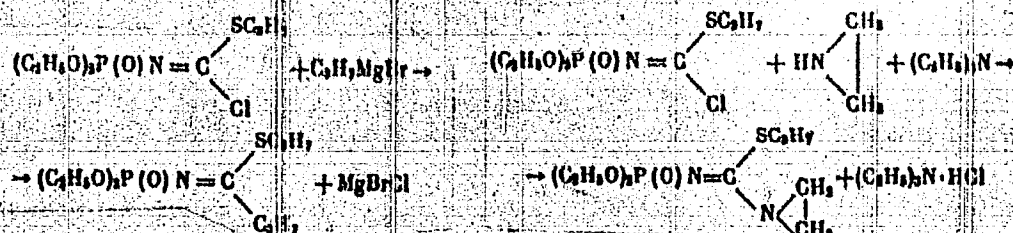
L 64174-65 EWA(j)/EWT(m)/E/F(c)/EWP(j)/EWA(b)-2 RM
 ACCESSION NR: AP501783 UR/0062/65/000/007/1298/1300
 542.91 12
 15
 13
 AUTHOR: Alimov, P. I. Levkova, L. N.
 TITLE: Synthesis of esters of K-phosphorylated imidothiocarbonic and imidocarbonic acid
 SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1965, 1298-1300
 TOPIC TAGS: organophosphorus compound
 ABSTRACT: The reaction of dichloromethylene amide of diethylphosphoric acid with mercaptides, glycolates, and ethylene chlorohydrin, and the reactions of thiopropylmonochloromethylene amide of the same acid with propylmagnesium bromide and ethylene imine were studied. Dichloromethylene amide readily reacts with sodium mercaptides, both chlorine atoms being replaced by thioalkyl groups:

$$(C_2H_5O)_2P(O)N=CH_2 + 2HSNa \rightarrow (C_2H_5O)_2P(O)N=C(SR)_2 + 2NaCl$$

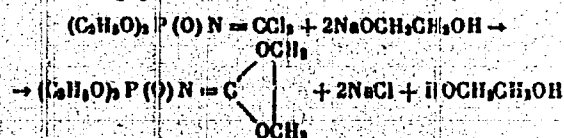
 where R = C₂H₅, (I); C₃H₇, (II); t-C₄H₉, (III); C₄H₉, (IV); CH₃C₆H₅, (V).
 The reaction of thiopropylmonochloromethylene amide of diethylphosphoric acid with propylmagnesium bromide or ethylene imine had the following course:

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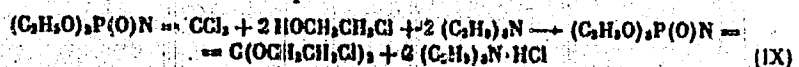
L 64174-65
ACCESSION NR: AP501:783



The reaction with sodium glycolate was:



In the presence of triethylamine, the reaction with ethylene dichlorohydrin probably yields a normal substitution product:

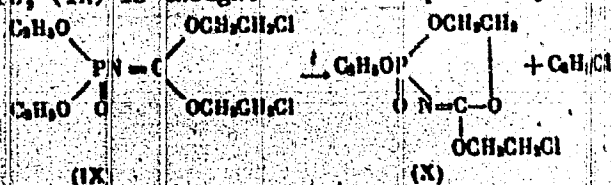


Card 2/3

L 64174-65

ACCESSION NR: AP5010783

At a high temperature, (IX) is thought to convert partially into the cyclic derivative (X):



The synthetic procedures employed are described. Orig. art. has: 1 table, 7 formulas.

ASSOCIATION: Khimicheskiy institut im. A. Ye. Arbuzova Akademii nauk SSSR (Chemical Institute, Academy of Sciences SSSR)

SUBMITTED: 09Nov64

ENCL: 00

SUB CODE: GC, CC

NO REF SOV: 001

OTHER: 000

Cord 3/3

ACC NR: AP6032594

SOURCE CODE: UR/0062/66/000/008/1486/1488

AUTHOR: Alimov, P. I.; Antokhina, L. A.

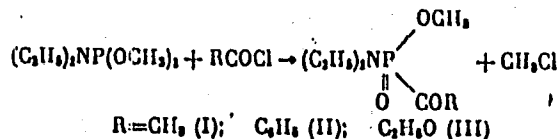
ORG: Institute of Organic and Physical Chemistry im. A. Ye. Arbuzov, Academy of Sciences, SSSR (Institut organicheskoy i fizicheskoy khimii Akademii nauk SSSR)

TITLE: Reaction of amido esters of phosphorous acid with acid chlorides

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 8, 1966, 1486-1488

TOPIC TAGS: phosphorous acid, chloride, organic amide, phosphonic acid.

ABSTRACT: Reactions of chlorides of acetic, benzoic and ethylcarbonic acid with O,O-dimethylphosphorous N-diethylamide produced corresponding derivatives of phosphonic acids

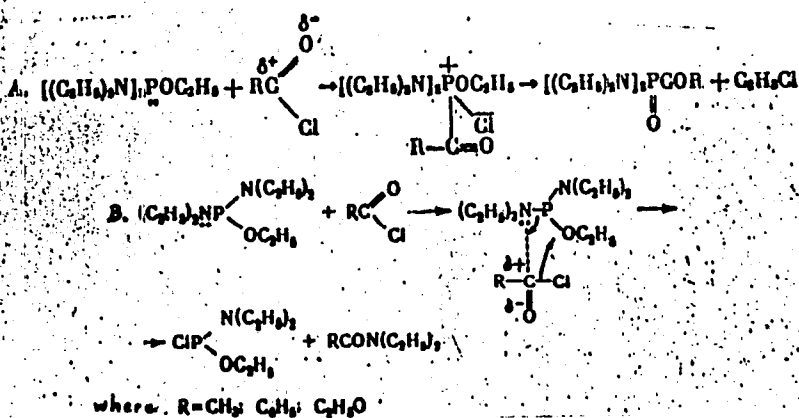


Action of the same acid chlorides on ethyl ester of phosphorous acid N,N'-tetraethyl-diamide can be represented as follows:

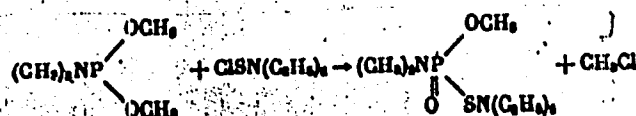
Card 1/4

UDC: 542.91+546.183.2+661.718.1

ACC. NR: AP6032594



N-diethylaminosulfonyl chloride reacting with amido esters forms products of Arbuzov's rearrangement in good yields



Card 2/4

ACC NR: AP6032594

Table 1 gives the physical constants of the synthesized amides and amido esters of phosphonic acids. Orig. art. has: 1 table.

SUB CODE: 07/ SUBM DATE: 27Jan66/ ORIG REF: 006/ OTH REF: 002

Card 3/4

ACC. NR. AP6032594

Table 1

N ^o .	Formula	B P, °C (p, mm Hg)	n _D ²⁰	d ₄ ²⁰	Yield, %
1	$(C_6H_5)_2NP \begin{matrix} \diagup OCH_3 \\ \diagdown COCH_3 \end{matrix}$	79—80(0,1)	1,4555	1,0744	41,3
2	$(C_6H_5)_2NP \begin{matrix} \diagup OCH_3 \\ \diagdown COC_2H_5 \end{matrix}$	147(1,5)	1,530	1,1322	67,9
3	$(C_6H_5)_2NP \begin{matrix} \diagup OCH_3 \\ \diagdown COOC_2H_5 \end{matrix}$	111—112,5(1,5)	1,4527	1,0922	36,1
4	$(C_6H_5)_2NP \begin{matrix} \diagup OCH_3 \\ \diagdown SNC_2H_5 \end{matrix}$	102—103(1,6)	1,4880	1,0553	52,3
5	$(CH_3)_2NP \begin{matrix} \diagup OC_2H_5 \\ \diagdown SNC_2H_5 \end{matrix}$	94—95(1)	1,4730	1,0785	44,6
6	$[(C_6H_5)_2N], PSN(C_2H_5)_2$	120—122(1)	1,5000	1,0145	72,0
7	$[(C_6H_5)_2N], PCOOCH_3$	152—153(1)	1,5390	1,0698	30,0—50,2
8	$[(C_6H_5)_2N], PCOCH_3$	98—99(1)	1,4700	1,0348	20,0
9	$[(C_6H_5)_2N], PCOOC_2H_5$	114—117(0,5)	1,4650	1,0524	19,2
10	$[(C_6H_5)_2N], PCONH_2$	MP 119—120	—	—	20,5

Card 4/4

ACC NR: AP6032588

SOURCE CODE: UR/0062/66/000/008/1370/1373

AUTHOR: Alimov, P. I.; Fedorova, O. N.

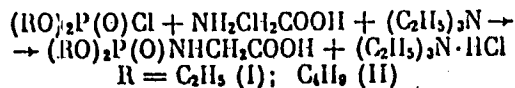
ORG: Chemical Institute im. A. Ye. Arbuzov, Academy of Sciences, SSSR (Khimicheskiy institut Akademii nauk SSSR)

TITLE: N-Phosphorylation of glycine and some of its derivatives

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 8, 1966, 1370-1373

TOPIC TAGS: glycine, phosphorylation, organic amide

ABSTRACT: The phosphorylation of amino acids and their derivatives is of interest in connection with the biological activity of amino acids, which in phosphorylated forms participate in metabolism. The article describes conditions for the phosphorylation of glycine and some of its substituted amides. Phosphorylated glycines were obtained by the action of dialkylphosphoric acid chlorides on glycine in water in the presence of a tertiary amine at $\sim 0^\circ\text{C}$:



Monosubstituted amides of N-phosphorylated aminoacetic acid, where the substituents are various groups, were obtained by the following reactions. The action of hydrox-

Card 1/3

UDC: 542.91+547.466+661.718.1

ACC NR: AP6032588

Table 1. Dialkyl Amides
of N-Dialkylphosphoryl-N-Ethylglycinos

Formula	BP, °C (p. mm Hg)	d_4^{20}	n_D^{20}	Yield, %
$\text{C}_2\text{H}_5\text{O}_2\text{P}-\text{N}-\text{CH}_2\text{CON}(\text{C}_2\text{H}_5)_2$	118--119,5 (0,5)	1,1076	1,4585	37,61
$(\text{C}_4\text{H}_9\text{O}_2\text{P})-\text{N}-\text{CH}_2\text{CON}(\text{C}_4\text{H}_9)_2$	131--132 (1)	1,0668	1,4569	47,1
$(\text{C}_6\text{H}_{13}\text{O}_2\text{P})-\text{N}-\text{CH}_2\text{CON}(\text{C}_6\text{H}_{13})_2$	144--145 (1,5)	1,0176	1,4542	62,0
$(\text{C}_8\text{H}_{17}\text{O}_2\text{P})-\text{N}-\text{CH}_2\text{CON}(\text{C}_8\text{H}_{17})_2$	163--164 (1)	1,0190	1,4570	57,7
$(\text{C}_{10}\text{H}_{21}\text{O}_2\text{P})-\text{N}-\text{CH}_2\text{CON}(\text{C}_{10}\text{H}_{21})_2$	126--127 (0,5)	1,0284	1,4515	53,4
$(\text{C}_{12}\text{H}_{25}\text{O}_2\text{P})-\text{N}-\text{CH}_2\text{CON}(\text{C}_{12}\text{H}_{25})_2$	146--147 (1)	0,9923	1,4525	45,4

SUB CODE: 07/ SUBM DATE: 23Feb64/ ORIG REF: 009/ OTH REF: 011

Card 3/3

ACC NR: K77003487

(N)

SOURCE CODE: UR/0394/66/004/006/0022/0026

AUTHOR: Neklesova, I. D.; Alimov, P. I.; Kudrina, M. A.; Iraidova, I. S.

ORG: Institute of Organic and Physical Chemistry im. A. Ye. Arbuzov, AN SSSR, Kazan'
(Institut organicheskoy i fizicheskoy khimii AN SSSR)

TITLE: Relationship between the chemical structure of certain amido esters and imides of phosphoric acid and their toxicity

SOURCE: Khimiya v sel'skom khozyaystve, v. 4, no. 6, 1966, 22-26

TOPIC TAGS: phosphoric acid, imide, insecticide, weed killer

ABSTRACT: About 50 amido esters of phosphoric acid and acylimidophosphates were synthesized and tested under laboratory conditions for toxicity to warm-blooded animals, insecticidal activity, and phytocidal properties to establish the possibility of their use as insecticides and determine the influence of individual chemical radicals upon the biological activity of the substances. The test specimens were white mice, granary weevils, house flies, and the bean aphid. The most interesting compounds were also tested on the rice weevil, the spider mite, gypsy moth larvae, and the migratory locust. Replacement of the OC_2H_5 group situated on the phosphorus atom in amido esters of phosphoric acid and acylimidophosphates by the OCH_3 group led to a decrease in the toxicity of the compounds with respect to warm-blooded animals. Increasing the

Card 1/2

UDC: 661.718.1: 541.697

L 10787-67

ACC NR: AP7003487

length of the hydrocarbon radical situated at the phosphorus atom in amido esters of phosphoric acid and acylimidophosphates lowered the toxicity both for warm-blooded and for invertebrate animals. The diethylamido group in amido esters and amides of phosphorus acids lowers the toxicity of the compounds in comparison with the dimethylamide group. When the O-2,2-dichlorovinyl group was replaced by the O-chloroallyl radical in mixed esters of phosphoric acid, the insecticidal properties of the compounds were sharply reduced. Replacement of the OC_2H_5 group in O,O-diethyl-O'-(2,2-dichlorovinyl)phosphate by the $\text{N}(\text{CH}_3)_2$ group lowered the toxicity of the compound for warm-blooded animals. When two OC_2H_5 groups in the same compound were replaced by the $\text{N}(\text{CH}_3)_2$ group, there was a further decrease in the toxicity for warm-blooded animals, a sharp decrease in the contact activity, and an intensification of the systemic action of the compound. The presence of a double bond in the compounds between the nitrogen and carbon atoms (P-N=C) sharply reduced the insecticidal properties of the compounds. Among the compounds studied, amidophosphates exhibiting systemic properties with respect to gnawing pests were detected (SD_{50} for warm-blooded animals was 85-150 mg/kg). Such compounds included: O-methyl-O-(2,2-dichlorovinyl)-N-dimethylamidophosphate and O-dichlorovinyl-N,N-tetramethyldiamidophosphate. Orig. art. has: 4 tables. [JPRS: 38,970]

SUB CODE: 06, 07 / SUBM DATE: 16Sep65 / ORIG REF: 016 / OTH REF: 006

Card 2/2 *ML*

ACC NR: AP7010721

SOURCE CODE: UR/0062/66/000/008/1461/1463

AUTHOR: Alimov, P. I.; Fedorova, G. N.

ORG: Institute of Organic and Physical Chemistry imeni A. Ye. Arbutov,
Academy of Sciences USSR (Institut organicheskoy i fizicheskoy khimii AN SSSR)

TITLE: Condensation of N-methylolamides of dialkylphosphorous acids
with mercaptans

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 8, 1966, 1461-1463

TOPIC TAGS: mercaptan, condensation reaction, organic amide, carboxylic acid

SUB CODE: 07

ABSTRACT: The condensation of N-methylolamides of dialkylphosphorous acids with mercaptans was found to proceed analogously to the corresponding carboxylic acid derivatives, yielding N-alkylthiomethylamides. Six new N-alkylthiomethylamides of dialkylphosphorous acids were produced by condensation of propyl, isopropyl, and butyl mercaptans with N-methylolamides of diethyl-, dipropyl-, diisopropyl-, and diisobutylphosphoric acids. The corresponding N-methylolamidophosphates were produced by the action of formaldehyde on amides of dialkylphosphoric acids (the alkyl residues being ethyl, propyl, isopropyl, and isobutyl) and that of paraform on the N-ethyl-amide of diethylphosphoric acid. Acyl derivatives were produced by the

Cord 1/2

UDC: 542.954 + 547.269.1 + 661.718.1

ACC NR: AP7010721

action of acetyl chloride upon N-methylamidophosphates. The physical properties of all the new derivatives are described. Orig. art. has: 2 formulas and 2 tables. JPRS: 40,351

Card 2/2

ALIMOV, P. Z.

Heat Transfer by Transverse Flow of a Two-Phase Stream Over a Hot Cylindrical Tube. P. Z. ALIMOV. *Soviet Physics-Tech. Physics*, Nov. 6, 1957, pp. 1,204-1,277. 11 refs. *Yatishchik*. Experimental investigation of heat transfer from surfaces of heated metallic cylinders placed transversely in a stream of air containing minute droplets of water. Qualitative relationships are obtained, at low air speeds, for each of the two heat-exchange states which are known to exist and to depend on the temperature of the steam surface.

2
1. #46

Field
copy

ACC NR: AT7001742

SOURCE CODE: UR/0000/56/000/000/0051/0059

AUTHOR: Alimov, R.

ORG: none

TITLE: The third boundary value problem of electrodynamics

SOURCE: AN KazSSR. Institut matematiki mekhaniki. Uravneniya matematicheskoy fiziki i funktsional'nyy analiz (Equations of mathematical physics and functional analysis). Alma-Ata, Izd-vo Nauka KazSSR, 1966, 51-59

TOPIC TAGS: Maxwell equation, electrodynamics, electronic computer, boundary value problem, approximation method, linear equation, algebraic equation/ K-20 electronic computer

ABSTRACT: An approximation method, based on a variational method, is studied for the solution of the third boundary value problem of electrodynamics. The experimental data showed that the electromagnetic phenomena can be described with sufficient precision by Maxwell equations. The third boundary value problem consists of calculating the electromagnetic field which arises. This can be done when the normal component of \vec{E} and the tangential components of \vec{H} on the surface S are known. The solution then requires determining the tangential component of \vec{E} and the normal component of \vec{H} . The electromagnetic field satisfies the integral equation

$$4\pi \vec{E}(p) = \vec{E}_1(p) - \text{rot} \oint U(p,s) \vec{\chi}(s) dS,$$

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ACC NR: AT7001742

$$4\pi \bar{H}(p) = \bar{H}_1(p) + \text{grad} \oint U(p, s) \psi(s) dS -$$

$$- \frac{\epsilon i \omega}{c} \oint U(p, s) \bar{\chi}(s) dS,$$

where

$$\bar{E}_1(p) = \text{grad} \left(\oint U(p, s) f(s) dS - \frac{4\pi}{i} \int U_p dQ - \right.$$

$$\left. - \frac{4\pi i \omega}{c} \int U \bar{J} dQ + \frac{\mu i \omega}{c} \oint U (g_1 \bar{r}_2 - g_2 \bar{r}_1) dS, \right.$$

$$\bar{H}_1(p) = \frac{4\pi}{c} \text{rot} \int U \bar{J} dQ - \text{rot} \oint U (g_1 \bar{r}_2 - g_2 \bar{r}_1) dS,$$

and $U = \frac{\cos kr}{r}$ is the fundamental solution of the Helmholtz equation $(\Delta - k^2) U = 0$, in which $k^2 = \frac{\epsilon \mu}{c^2} \omega^2$. The Bubnov-Galerkin method is used for finding the approximate solution of the integral equation. Since the problem is for a spherical surface, spherical coordinates are used. The Liou coefficients also enter the problem. The conditions for convergence are: 1) the problem has a solution in space H ; 2) the sequence of the coordinate functions is complete; 3) the coordinate functions must be linearly independent. The solution is unique. This problem leads to a system of linear algebraic equations. One problem is analyzed (using an M-20 electronic computer) with the help of matrix theory. Orig. art. has: 17 formulas.

SUB CODE: 12, 20/ SUBM DATE: 22Jun66/ ORIG REF: 004

Card 2/2

ALIMOV, R.

Second boundary value problem of electromagnetic vibrations.
Vest. AN Kazakh.SSR 20 no.11:54-59 N '64.

(MIRA 18:2)

ALIMOV, R.

Norms are new, but deficiencies are old. Fin. SSSR 37 no.11:
30-32 N'63. (MIRA 17:2)

1. Nachal'nik upravleniya Ministerstva finansov Kirgizskoy SSR.

DONETS, S. (Rostov-na-Donu); KUZ'MIN, A. (Irkutsk); MEDVEDEV, N. (Saratov);
LICHKOV, G. (Arkhangel'sk); TSYPIN, Ye. (Sverdlovsk); GITCHENKO, I.
(Sochi); GRUZINTSEVA, A. (Novosibirsk); ALIMOV, R. (Alma-Ata);
GOLOBORONOV, M. (Syktyvkar)

Outposts of air transportation. Grazhd.av. 20 no. 4:22-24 Ap
'63. (MIRA 16:5)

(Aeronautics, Commercial)

L 26017-66 EWT(d)/EWT(1) LIP(a) CS
ACC NR: AT6013423 SOURCE CODE: UR/00(X)/65/000/0060/0064

AUTHOR: Alimov, R.

ORJ: none

TITLE: A boundary value problem of electrodynamics

SOURCE: AN KazSSR. Sektor matematiki i mekhaniki. Issledovaniya po differentsial'nym uravneniyam i ikh primeneniya (Research on differential equations and their application). Alma-Ata, Izd-vo Nauka, 1965, 60-64

TOPIC TAGS: boundary value problem, electrodynamics, existence theorem, electromagnetic field, vector

ABSTRACT: A third boundary value problem of determining the vectors of the electric (\vec{E}) and magnetic (\vec{H}) components of a field that satisfy the following conditions in domain Q :

$$\begin{array}{ll} 1. \operatorname{rot} \vec{E} = k \vec{H}, & 2. \operatorname{div} \vec{E} = \gamma, \\ 3. \operatorname{rot} \vec{H} = \vec{I} - k \vec{E}, & 4. \operatorname{div} \vec{H} = 0 \end{array}$$

is examined. Four theorems are formulated and proved. If

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L 26017-66

ACC NR: AT6013423

$$\int |K(s, s_0) - \tilde{K}(s, s_0)| ds < \alpha,$$

$$\int |\tilde{\Gamma}(s, s_0; \lambda)| ds \leq \beta,$$

$$1 - \frac{1}{2\pi} \alpha \left(1 - \frac{1}{2\pi} \beta\right) > 0,$$

where α, β are constants, $\tilde{\Gamma}(s, s_0; \lambda)$ the resolvent kernel, and $\tilde{K}(s, s_0)$ is

$$\tilde{\psi}(s_0) = F(s_0) + \frac{1}{2\pi} \int \tilde{K}(s, s_0) \tilde{\psi}(s) ds,$$

then

$$\psi(s_0) + \lambda \int K(s, s_0) \psi(s) ds = F(s_0)$$

has a unique solution. The system

$$X_1(s_0) - \frac{1}{2\pi} \int [L_{11}(s, s_0) X_1(s) + L_{12}(s, s_0) X_2(s)] ds = X_1^*(s_0),$$

$$X_2(s_0) - \frac{1}{2\pi} \int [L_{21}(s, s_0) X_1(s) + L_{22}(s, s_0) X_2(s)] ds = X_2^*(s_0),$$

$$\psi(s_0) - \frac{1}{2\pi} \int \frac{\partial u}{\partial n(s_0)} \psi(s) ds + \frac{h}{2\pi} \int u(\bar{n}(s_0), \bar{X}(s)) ds = \psi^*(s_0)$$

Card 2/3

L 26017-66

ACC NR: AT6013423

is solvable for any right side, and the existence theorem is proved. Orig. art. O
has: 14 formulas.

SUB CODE: 12/

SUBM DATE: 23Jun65/ ORIG REF: 004

Card 3/3

PB

L 26011-66 EWT(d)/EWT(1) I/P(c) GS

ACC NR: AT6013422

SOURCE CODE: UR/0000/65/000/000/0054/0059

AUTHOR: Alimov, R.

ORG: none

TITLE: Integral equations of the second problem of electrodynamics

SOURCE: AN KazSSR, Sektor matematiki i mekhaniki. Issledovaniya po differentsial'nym uravneniyam i ikh primeneniyu (Research on differential equations and their application). Alma-Ata, Izd-vo Nauka, 1965, 54-59

TOPIC TAGS: integral equation, electrodynamics, boundary value problem, electromagnetic field, vector, coordinate system

ABSTRACT: The problem of determining the vectors \vec{E} and \vec{H} of an electromagnetic field which satisfy the conditions

$$\text{rot } \vec{E} = -\frac{1}{c} \mu_0 \vec{H}, \quad \text{div } \vec{E} = \rho,$$

$$\text{rot } \vec{H} = \frac{1}{c} \epsilon_0 \vec{E} + \vec{I}, \quad \text{div } \vec{H} = 0$$

in domain Q is examined. The boundary conditions on surface S are

$$(\vec{n}, \vec{E}) = f_l, \quad (\vec{n}, \vec{H}) = g, \quad (l=1, 2),$$

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ACC NR: AT6013422

The following system of integral equations is obtained;

$$4\pi \vec{E}(P) = \vec{E}_i(P) + \text{grad} \int U(\vec{n}, \vec{E}) dS + k \int U(\vec{n}, \vec{H}) dS,$$

$$4\pi \vec{H}(P) = \vec{H}_i(P) - \text{rot} \int U(\vec{n}, \vec{H}) dS.$$

These equations give \vec{E} and \vec{H} , after X and Ψ are determined. The final system

$$\begin{aligned} 2\pi X(\theta', \varphi') &= X_0(\theta', \varphi') + R^2 \int_0^\pi \int_0^{2\pi} \frac{1}{r} \frac{\partial U}{\partial r} (1 - \sin \theta' \sin \theta \cos(\varphi' - \varphi) - \\ &- \cos \theta' \cos \theta) \sin \theta X(\theta, \varphi) d\theta d\varphi + k R^2 \int_0^\pi \int_0^{2\pi} U [(\sin \theta' \cos \theta \cos(\varphi' - \varphi) + \\ &+ \cos \theta' \cos \theta) \psi_1(\theta, \varphi) + \sin \theta' \sin(\varphi' - \varphi) \psi_2(\theta, \varphi)] \sin \theta d\theta d\varphi, \\ 2\pi \psi_1(\theta', \varphi') &= \psi_{01}(\theta', \varphi') + R^2 \int_0^\pi \int_0^{2\pi} \frac{1}{r} \frac{\partial U}{\partial r} [(\cos \theta' \cos \theta \cos(\varphi' - \varphi) + \\ &+ \sin \theta' \sin \theta - \cos(\varphi' - \varphi)) \psi_1(\theta, \varphi) + \sin(\varphi' - \varphi)(\cos \theta' - \\ &- \cos \theta) \psi_2(\theta, \varphi)] \sin \theta d\theta d\varphi. \end{aligned}$$

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L 26011-66

ACC NR: AT6013422

$$2\pi\psi_1(\theta', \varphi') - \psi_2(\theta', \varphi') + R^2 \int_0^\pi \int_0^{2\pi} \frac{1}{r} \frac{\partial U}{\partial r} [\sin(\varphi' - \varphi)(\cos \theta' - \cos \theta) \psi_1(\theta, \varphi) - (\cos \theta' \cos \theta \cos(\varphi' - \varphi) - \sin \theta' \sin \theta - \cos(\varphi' - \varphi)) \times \psi_2(\theta, \varphi)] \sin \theta d\theta d\varphi,$$

when substituted into the above integral equations, gives a complete determination of the vectors \vec{E} and \vec{H} . Orig. art. has: 13 formulas.

SUB CODE: 12/

SUBM DATE: 23Jun65/ ORIG REF: 001

Card 3/3

ALIMOV, R. A.

USSR/Electricity - Personalities

Jan 52

"Professor N. N. Shohedrin (His 60th Birthday and 30 Years of Scientific and Pedagogical Activity)," A. A. Gorov, V. A. Tolvinskiy, M. A. Shatalen, R. A. Alimov, N. I. Toperverkh, Kh. P. Fazylov, G. R. Rakhimov, M. Ye. Syrkin, B. I. Shabdash

"Elektrichestvo" No 1, p 92

Shohedrin has published more than 30 scientific works, most of them devoted to the calculation of short-circuit currents. Recently, he has worked on dc power transmission and has directed studies on long-distance power transmission by dc and ac at the Power Eng Inst, Acad Sci Uzbek SSR. Shohedrin is a member of the Permanent Commission on Short-Circuit Currents, Min of Elec Power Stations, the Commission on Long-Distance Power Transmission, Dept of Tech Sci, Acad Sci USSR, and of the Sci Council of the Sci Res Inst of DG.

201716

ALIMOV, R.A.

Irrigation of the Golodnaya Steppe and research problems connected
with it. Izv. AN Uz. SSR no. 11:3-9 '56. (MIRA: 14:5)

1. Chlen-korrespondent AN UzSSR.
(Golodnaya Steppe—Irrigation)

ABAL'YANTS, S.Kh., kand.tekhn.nauk, red.; ALIMOV, R.A., red.; ALTUNIN, S.T., doktor tekhn.nauk, red.; VYZGO, M.S., red.; ZAPROMETOV, S.G., kand. tekhn.nauk, red.; MUKHAMEDOV, A.M., kand.tekhn.nauk, red.; NIKITIN, I.K., kand.tekhn.nauk, red.; POPOVA, K.L., red.; POSLAVSKIY, V.V., akademik, red.; ROSSINSKIY, K.I., kand.tekhn.nauk, red.; URAZBAYEV, M.T., doktor tekhn.nauk, red.; IVANENKO, T.A., red.izd-va; GOR'KOVA, Z.P., tekhn.red.

[Channel processes and hydraulic engineering; papers of a coordination conference, June 7-12, 1955] Russkiye protsessy i gidrotekhnicheskoe stroitel'stvo; materialy koordinatsionnogo soveshchaniya 7-12 iyunia 1955 g. Tashkent, Izd-vo Akad. nauk Uzbekskoi SSR, 1957. 416 p.

(MIRA 11:5)

1. Akademiya nauk SSSR. Sektsiya po nauchnoi razrabotke problem vodnogo khoziaistva. 2. Sredneaziatskiy politekhnicheskii institut (for Abal'yants). 3. Ministerstvo vodnogo khozyaystva UzSSR (for Alimov). 4. Sredneaziatskiy nauchno-issledovatel'skiy institut irrigatsii (for Vyzgo, Nikitin). 5. Institut sooruzheniy AN UzSSR. (for Altunin, Zaprometov, Mukhamedov, Urazbayev). 7. Chlen-korrespondent AN UzSSR (for Alimov, Altunin, Vyzgo). 8. Akademiya nauk UzSSSR (for Poslavskiy)
(Hydraulic engineering)

~~ALIMOV, B.A.~~, red.; YEREMENKO, V.Ye., red.; ZAKIROV, K.I., akademik, red.;
KANASH, S.S., akademik, red.; MUKHAMEDZHANOV, M.V., akademik, red.;
NABIYEV, M.N., akademik, red.; RYZHOV, S.N., red.; SADYKOV, S.S., red.;
YAKHONTOV, V.V., red.; BUGAYEV, V.A., kand.fiz.-mat.nauk, otvetstvennyy
red.; PANKOV, M.A., prof., doktor sel'skokhozyaystvennykh nauk,
otvetstvennyy red.; KURANOVA, L.I., red. izd-va; GOR'KOVA, Z.P.,
tekhn.red.

[The cotton plant] Khlopchatnik. Tashkent. Vol.2. [Climate and
soils in cotton growing regions of Central Asia] Klimat i pochvy
khlopkovykh raionov Srednei Azii. 1957. 626 p. (MIRA 11:1)

1. Chlen-korrespondent AN UzSSR (for Alimov, Yeremenko, Sadykov,
Yakhontov). 2. Deystvitel'nyy chlen Akademii sel'skokhozyaystvennykh
nauk UzSSR (for Yeremenko, Mukhamedzhanov, Ryzhov). 3. AN UzSSR
(for Zakirov, Kanash, Mukhamedzhanov, Nabiyeu). 4. Vsesoyuznaya
akademiya sel'skokhozyaystvennykh nauk im. V.I. Lenina (for Kanash,
Ryzhov). 5. Akademiya nauk Uzbekskoy SSR, Tashkent. Institut
matematiki i mekhaniki.

(Soviet Central Asia--Soils) (Soviet Central Asia--Climate)
(Cotton)

KANASH, S.S., akademik; MAL'TSEV, A.M.; VLASOVA, N.A.; PASHCHENKO, Z.M.; ROZHANOVSKIY, S.Yu.; MAUYER, F.M.; MOKEYEVA, Ye.A.; KLYUYEV, G.A.; BURYGIN, V.A.; SHLEYKHER, A.I.; RUMI, V.A.; ROMANOV, I.D.; AVTONOMOV, A.I., otv.red.; MUKHAMEDZHANOV, M.V., akademik, glavnyy red.; RYZHOV, S.N., akademik, samostitel' glavnogo red.; ALIMOV, R.A., red.; DABADAYEV, A.D., akademik, red.; DZHALILOV, Kh.W., kand. ekon.nauk, red.; YEREMENKO, V.Ye., akademik, red.; ZAKIROV, K.Z., akademik, red.; MATNANOV, N.M., akademik, red.; NABIYEV, M.N., akademik, red.; SADIYOV, S.S., red.; TOGOYEV, I.N., kand.ekon.nauk, red.; YAKHONTOV, V.V., red.; KURANOVA, L.I., red.izd-va; RAKHMANOVA, M.D., red.izd-va; BARTSEVA, V.P., tekhn.red.

[Cotton] Khlopchatnik. Tashkent. Vol.3. [Structure and development of cotton] Stroenie i razvitie khlopchatnika. 1960. 402 p. (MIRA 13:10)

1. Akademiya nauk Uzbekskoy SSR, Tashkent. 2. Akademiki UzSSR (for Kanash, Mukhamedzhanov, Zakirov, Nabiyeu). 3. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Kanash). 4. Tsentral'naya selektsionnaya stantsiya Vsesoyuznogo nauchno-issledovatel'skogo instituta khlopkovodstva Uzbekskoy akademii sel'skokhozyaystvennykh nauk (for Kanash). 5. Tashkentskiy sel'skokhozyaystvennyy institut (for Mal'tsev, Shleykher). 6. Institut genetiki i fiziologii rasteniy AN UzSSR (for Vlasova, Mauyer, Klyuyev, Rumi, Romanov).

(Continued on next card)

KANASH, S.S. --- (continued) Card 2.

7. Sredneaziatskiy gosudarstvennyy universitet (for Pashchenko).
8. Institut botaniki AN UzSSR (for Rozhanovskiy, Mokeyeva, Burygin).
9. Chleny-korrespondenty AN UzSSR (for Avtonomov, Alimov, Yermenko, Sadykov, Yakhontov).
10. Uzbekskaya Akademiya sel'skokhozyaystvennykh nauk (for Mukhamedzhanov, Ryzhov, Dadabayev, Yermenko, Zakirov, Mannanov).

(Cotton)

RESHETKINA, Natal'ya Mikhaylovna; ALIMOV, R.A., otv. red.; ROMANIKA, N.A.,
red. 1zd-va; GAYSYNSKAYA, I.G., red. 1zd-va; BARTSEVA, V.P., tekhn.
red.

[Hydrogeological principles for planning vertical drainage in the
Golodnaya Steppe] Gidrogeologicheskie osnovy proektirovaniia ver-
tikal'nogo drenazha v Golodnoi stepi. Tashkent, Izd-vo Akad. nauk
Uzbekskoi SSR, 1960. 141 p.
(MIRA 14:9)

1. Chlen-korrespondent AN Uzbekskoy SSR (for Alimov).
(Golodnaya Steppe--Drainage)

KANASH, S.S., akademik, otv. red.; SHARDAKOV, V.S., kand. biol. nauk, otv. red.; GUBANOV, G.Ya., kand. biol. nauk, otv. red.; YENI-LEYEV, Kh.Kh., doktor biol. nauk, otv. red.; MUKHAMEDZHANOV, N.Y., akademik, red.; RYZHOV, S.N., akademik, red.; ALIMOV, R.A., red.; DADABAYEV, A.D., akademik, red.; DZHALILOV, Kh.N., kand. ekon. nauk, red.; YEREMENKO, V.Ye., akademik, red.; ZAKIROV, K.Z., akademik, red.; MANNANOV, N.M., akademik, red.; NABIYEV, M.N., akademik, red.; SADYKOV, S.S., red.; TOGOYEV, I.N., kand. ekon. nauk, red.; YAKHONTOV, V.V., red.; PETROV, V.G., kand. sel'khoz. nauk, red.; [deceased]; RAKHMANOVA, M.D., red.; BARTSEVA, V.P., tekhn. red.; KARABAYEVA, Kh.U., tekhn. red.

[Cotton] Khlopushnik. Tashkent. Vol.4. [Physiology and biochemistry of cotton] Fiziologiya i biokhimiya khlopushnika. 1960. 704 p. (MIRA 14:5)

1. Akademiya nauk Uzbekskoy SSR, Tashkent. 2. Akademiya nauk Uzbekskoy SSR (for Mukhamedzhanov, Kanash, Zakirov, Nabiyeu, Yakhontov, Yermenko) 3. Uzbekskaya akademiya sel'skokhozyaystvennykh nauk (for Mukhamedzhanov, Ryzhov, Dadabayev, Yermenko, Zakirov, Mannanov) 4. Chleny-korrespondenty AN UzSSR (for Alimov, Yermenko, Sadykov, Yakhontov) 5. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Kanash)

(Cotton)

YASEVICH, V.K., prof.; KHODIYEV, E.M., assistant; VAVILIN, M.K.; AKALAYEV, N.Kh.; BORZENKO, A.A., ordinator; ALIMOV, R.A.; RABINOVICH, S.A.; TSENER, Kh.Kh.; KOKOSOVA, T.A.

Angiocardiography in the diagnosis of congenital vitia cordis.
Med. zhur. Uzb. no.10:10-16 '61. (MIRA 14:10)

1. Iz fakul'tetskoy khirurgicheskoy kliniki sanitarnogo i pediatri-
cheskogo fakul'tetov (zav. - prof. V.K.Yasevich) Tashkentskogo
gosudarstvennogo meditsinskogo instituta.

(ANGIOCARDIOGRAPHY)
(HEART--ABNORMITIES AND DEFORMITIES)

ALIMOV, R.A.

Quick method for the staining of blood platelets. Med. zhur. Uzb.
no.3:20 Mr '60. (MIRA 15:2)

1. Iz Nauchno-issledovatel'skogo instituta rentgenologii, radiologii
i onkologii Ministerstva zdravookhraneniya UzSSR (direktor - prof.
D.M.Abdurasulov).
(BLOOD PLATELETS) (STAINS AND STAINING (MICROSCOPY))

R.A. Alimov, 1902- ; on his 60th birthday. Izv. AN Uz. SSR. Ser. tekhn.
nauk 7 no.1:82 '63. (MIRA 17:6)

ALIMOV, R. Sh., aspirant

Experimental observation on compound antibacterial therapy in tuberculosis. Med. zhur. Uzb. no.5:72-77 My'63 (MIRA 17:4)

1. Iz Tsentral'nogo instituta tuberkuleza (dir. - prof. N.A. Smelov, nauchnyye rukovoditeli - prof. F.L. Elinson i prof. V.I. Puzik) Ministerstva zdravookhraneniya SSSR.

NIKOLAY, V. . . (Tashkent, ul. Gogol'naya, 53); ALIMOV, R.A. (Tashkent,
ul. Frunze, 76)

Effect of some stimulants of hemopoiesis on the antineoplastic
activity of sarcosine. "Sp. dok. IO no.10:78-81 '64.

(MIRA 18:8)

1. Iz Uzbekskogo nauchno issledovatel'skogo instituta rentgenologii,
radiologii i onkologii (direktor - prof. D.Ye. Abdurazulov).

ALIMOV, R.Z. —

"Investigation of Heat and Mass Exchange in the Evaporation
of a Liquid From a Heated Cylindrical Surface in Transverse Flow."
Cand Tech Sci, Kazan Aviation Inst, Kazan, 1954. (RZhMekh, Oct 54)

Survey of Scientific and Technical Dissertations Defended at
USSR Higher Educational Institutions (10)

SO: Sum. No. 481, 5 May 55

ALIMOV, R.Z.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1356
AUTHOR ALIMOV, R.Z.
TITLE ~~The Heat Transfer~~ on the Occasion of the Transversal Passing of
a Two-Phase Flow Round a Heated Cylindrical Tube.
PERIODICAL Zhurn. tekh. fis, 25. fasc. 6, 1291-1305 (1956)
Issued: 7 / 1956 reviewed: 10 / 1956

The present work deals with the heat transfer on the occasion of the transversal passing of air containing extremely small droplets of water round metal cylinders. Owing to the difficulties arising in connection with the aforementioned conditions the experiments were carried out with simplified conditions. Order and method of the experiments are described on the basis of a drawing. A liquid (distilled water) was pumped from a pressure vessel through a purifying filter to a centrifugal strainer under a pressure of 2 - 10 atm. The drops of water leaving the centrifugal strainer drop under the influence of gravity, taking the air with them. Hereby a two-phase cylindrical flow with a diameter of up to 1 m is produced at distances of up to 0,5 m from the strainer; in this flow the metal cylinder to be investigated was located. The water was collected in a vessel, purified, and pumped back into the pressure vessel. The test cylinders were made of duraluminium rods of 12, 18, 22, 25 and 40 mm diameter, and were heated from within by an alternating current. The temperature of the surface of the compensators and test cylinders was measured by means of thermopiles. Considering heat transfer by radiation, there was good agreement among the results obtained at all surface temperatures, which indicates that the apparatus used is

Žurn.techn.fis, 26, fasc.6, 1291-1305 (1956) CARD 2 / 2 PA - 1356

well suited for its purpose.

Conclusions: According to the temperature of the cylinder surface, there exist two different kinds of flow round the cylinders and of heat transfer: a film-like and a not wetted kind. Transition from the film-like to the not wetted kind takes place if the temperature of the cylinder surface is somewhat higher than the boiling temperature of the liquid, and by this transition the intensity of the heat transfer is considerably reduced. Experimental results are here represented in form of generalized quantitative dependences. However, because of the special character of the experimental method employed several quantities entering into these relations are indirectly determined by computation.

The process investigated is suited for a variety of technical applications. Above all the film-like flow may be most effective for the purpose of cooling highly heated surfaces. In the case of not too large REYNOLD numbers (of the order of from 300 to 5000) and in the case of a moderate consumption of liquid, it was possible to conserve a heat flux of up to 150.000 kcal/m². hour and a heat transfer coefficient of up to 1700 kcal/m².hour.°C. This is 30 - 35 times as much as in the case of a flow with only air. This work is of great practical importance for the gas cooling of reactors.

INSTITUTION:

ALIMOV, R. Z.

B-13

Category: USSR

Abs Jour: RZh--Kh, No 3, 1957, 7703

Author : Alimov, R. Z.

Inst : Academy of Sciences USSR

Title : Concerning One Type of Stable Free Surface Formed by a Heated Thin Liquid Film

Orig Pub: Dokl. AN SSSR, 1956, Vol 109, No 3, 559-560

Abstract: A film of thickness $20-200\mu$ is formed on a horizontal metal cylinder 22 mm in diameter which is placed in a current of water droplets 50-150 μ in diameter, freely falling under the effect of gravity. If the temperature of the cylinder does not exceed 80° , the free surface of the film remains smooth. At temperatures above 80° annular projections and trough are formed along the cylinder; an average of 1.7-2.0 projections and trough are formed per centimeter length. This state is maintained up to temperatures in the neighborhood of the boiling point after which all the liquid evaporates. The formation of a wave-like stable surface in the presence of considerable temperature gradients

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ALIMOV, R.Z.

Stable forms of free surfaces of thin layers and fine drops of
heated liquids. Izv. vys. ucheb. zav.; fiz. no.2:144-150 '58.
(MIRA 11:6)

1. Kazanskiy aviatsionnyy institut.
(Liquids) (Surface chemistry)

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AUTHOR: Alimov, R. Z.

TITLE: On the Mechanism of the Process of Heat and Mass-
Transfer During Evaporation Cooling of Strongly
Heated Surfaces

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya
tekhnika, 1960, Nr 1, pp 94-103 (USSR)

ABSTRACT: The paper deals with the problem of "perspiration"
cooling which is considered to be the most economic
method of cooling, in which it is possible to neglect
the non-productive losses of the cooling liquid in the
form of droplets separated from the bulk of the coolant
and carried away by the gases (see Ref 1). The
analysis takes into consideration mutual inter-
dependence of the heat and mass-transfer. The presence
of a foreign substance moving in the transverse
direction through the layer adjoining the surface
alters the hydrodynamics as well as the physical
properties of the boundary layer. As yet, there is
neither a reliable theoretical method nor sufficient

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On the Mechanism of the Process of Heat— and Mass-Transfer During
Evaporation Cooling of Strongly Heated Surfaces

experimental data to enable us to deal with this problem. The existing results are contradictory (Refs 2, 6 and 16). Since there are no reliable data to indicate that the temperature field changes substantially when a diffusing stream is present, this effect is neglected in the article and only the changes in the coefficient of thermal conduction of gases in the boundary layer and the effect of these changes on the heat transfer are investigated. The processes of heat- and mass-transfer are assumed to be confined to the boundary layer only; furthermore, it is assumed that the fluid, the thermal and the diffusive boundary layers all have the same thickness. The radiation heat transfer to the wall is neglected, so that only conductive heat transfer is considered. The mass-transfer is assumed to be entirely due to diffusivity. The treatment is one-dimensional. Starting with the heat flux per unit area from a plane A of the boundary

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