

MEDVED', R.A.; SEREDININA, N.V.

Hygienic characteristics of working conditions in the case of
electrostatic spray painting. Gig. truda. i prof. zab. 4 no.6:
7-11 Je '60. (MIRA 15:4)

1. Meditsinskiy institut, Gor'kiy.
(SPRAY PAINTING--HYGIENIC ASPECTS)

Medved, S.V.

Total cross section for the $p-p$ interaction in the energy
range 410-600 m.e.v. V. P. Dzhelelov, V. I. Moskalev,
and S. V. Medved. *Doklady Akad. Nauk S.S.S.R.* 104.

3

MEDVED, S. V.

163
//120-58-5-6/46
Katysher, Yu. V.,

ring High-energy Small-
ca. 1959, Nr 5.

cross-sections in the
of mass system) at
id consist of a
neutron beam
collimator.
Fig. 1. The beam is then
target whose central axis
axis of the beam. The
if a neutron telescope
ry axis of the apparatus.
at it is possible to use
erial than in the usual
ed by 680 MeV protons
hrochyclotron of the
if the Joint Institute for

4

scattered by the target
telescope consisting
a converter. Large
converter is placed
placed after the
distance. In order to
are not due to charge
ditional counter 3 is
and is in coincidence
This scheme is in
is converter is in the
cm in diameter and 6 cm
the lab system is 1' at
Pragunov and V.S. Turonov
in building the
table and 3 Soviet
akh isolated (only
idea) 4

1959, No. 5, p. 163

ME JVED S.V.

507/56-56-3-12/71
.. Kalyanov, Yu. V.,

atoms in the Region of Small
0 Mev (Rassayniye naytronov
pri energii naytronov 530 Mev)
sticheskoj fiziki, 1959.

ferential cross section of
iron energy of 530 Mev in
r this purpose a special
was developed, which has al-
he authors' earlier papers
Fig 1). Results:
unit of μ -presentation cross
ing cross 10^{-24} cm²/steradian

10 ± 1.5
0.2 ± 1.4
6.4 ± 0.9

4.5 ± 0.5
3.7 ± 0.2

the amplitude equation of
 $\epsilon M = a + \beta(\sigma_1 + \sigma_2)h +$
 $i\sigma_2(\sigma_2^2)$ is possible by
one. It holds that
 $|k|^2$ or

notes the wave number of the
 $(S - 0^0) - [\text{Im}(S - 0^0)]^2$.
by using the experimental
it is found that
5.6 · 10⁻²⁷ cm²/steradian.
one of $\text{Im}(S - 0^0)$ for
is states with isotopic
racy of ~ 10%. Apart from a

507/56-56-3-12/71
Region of Small Angles at

with a decreasing scatter-
e of forward scattering
tering cross sections. A
d by means of the optical
l whether nucleon-nucleon
scribed on the basis of
rs 2 figures, 2 tables,
Soviet.

(see jointly
search)

82036
S/056/60/038/02/58/061
B006/B014

24.6900

AUTHORS: Amaglobeli, N. S., Golovin, B. M., Kazarinov, Yu. M.,
Medved', S. V., Polev, N. M.

TITLE: Determination of the Coupling Constant of ¹⁹Pion - Nucleon

Determination of the Coupling Constant of
Pion - Nucleon Interaction From the Cross
Section of Elastic Neutron Scattering by
Protons at an Energy of 630 Mev

S/056/82036/058/02/58/061
B006/B014

values by the function $x^2 \sigma_{np}(\theta)$, the authors used a series of experiment-
al functions, ranging from linear to parabolic functions of the fourth

Determination of the Coupling Constant of
Pion - Nucleon Interaction From the Cross
Section of Elastic Neutron Scattering by
Protons at an Energy of 630 Mev

⁸²⁰³⁶
S/056/60/038/02/58/061
B006/B014

with $m > 4$ because these terms are small compared to the error of more
than 100% the authors then obtained the value $f^2 = 0.04 \pm 0.005$.

S/120/62/000/005/017/036
E192/E382

AUTHORS: Zinov, V.G. and Medved', S.V.

TITLE: Smoothing of the time intervals between randomly
distributed pulses

IMPORTANT

S/120/62/000/005/017/036

Smoothing of the time intervals... E192/E382

amplifier then generates a pulse whose duration is $m\tau$. This pulse actuates the generator, whose natural period is also equal to τ . The operation of the generator is only possible in the presence of the pulse from the limiter. The number of output

S/120/63/000/001/054/072
E052/E314

AUTHORS: Medved', S.V. and Ozerov, Ye.B.
TITLE: Method for calibration of the length of an
oscillograph time-base
PERIODICAL: Pribory i tekhnika eksperimenta, no. 1, 1963,
177 - 178

Method for calibration

S/120/63/000/001/054/072
E032/E314

Fig. 1:

Fig. 2:

ACC NR: AP7012413

SOURCE CODE: UR/0367/67/005/001/0146/0149

AUTHOR: Golovin, B. M.; Zul'karneyev, R. Ya.--Zulkarneev, R. Ya.; Kiselev, V. S.;
Medved', S. V.--Medved, S. V.; Nikanorov, V. I. Pisarev, A. F.; Semashko, G. L.

ORG: Joint Institute for Nuclear Research (Ob'yedinennyy institut yadernykh
issledovaniy)

TITLE: Spin correlation during elastic scattering of polarized 605 MEV
protons on protons

ACC NR: AP7012413

for examining the photoplates. Orig. art. has: 1 figure and 4 formulas.
[Based on authors' Eng. Abst.] [JPRS: 40,393]

MEDVED, T. Ya.

Organophosphorus compounds. XIV. Synthesis of anti-
~~unobtainable acids~~. T. D. Kalachnik and T. Ya.
 Medved. *Izv. Akad. Nauk S.S.S.R., Otdel. Khim.*
Nauk 1950, 1235-40; cf. *C.A.* 43, 5739e; 44, 7257f. —Heating
 $(EtO)_2P$ with CH_2I_2 6-7 hrs. with continuous removal of EtI
 in a stream of dry air, gave 30-40% $(ClCH_2)_2P(O)(OEt)_2$, b_p
 119-20°, n_D^{20} 1.5000, d_4^{20} 1.0606. This (1.05 g.) kept 8
 days at room temp. with 10 ml. 25% NH_4OH , then coned.
in vacuo, gave an oil and a solid, which on extr. with Et_2O
 gave an unstated amt. of unreacted ester, b_p 111-12°; the
 Et_2O -insol. crystals, $m. 168^\circ$ (from abs. $EtOH-C_6H_6$), were
 shown to be $(ClCH_2)_2P(O)(OEt)_2$.

2nd disson. consts. are widely different, titrations with
 phenolphthalein and with alizarin red may be used. A
 simpler prepn. is also given. Dry paraform (sublimes at
 145-55°) (200 g.) in a 2-l. autoclave was treated slowly with
 1320 g. PCl_5 , then heated 5 hrs. to 220-50° (pressure about
 30 atm.); distn. gave 500-540 g. $(ClCH_2)_2P(O)Cl_2$ (50%), b_p
 93°, n_D^{20} 1.4983; this (50 g.) was slowly added at 2° to 150
 ml. abs. $EtOH$, let stand overnight, and distd., yielding 40
 g. (72%) $(ClCH_2)_2P(O)(OEt)_2$, b_p 88-9°, n_D^{20} 1.4412, d_4^{20}
 1.0606. The same ester was obtained in 95% NH_4OH in

MEDVED' T. Ya.

PA 174T13

USSR/Chemistry - Organophosphorous Jan/Feb 51
Compounds

"Brief Communications: Toward the Synthesis of
Aminomethylphosphonic Acid," M. I. Kabachnik, T.

USSR/Chemistry - Org
C

"Alkylation of Amino
Medved', M. I. Kabac
Sci USSR

"Iz Ak Nauk SSSR, Ot

Found that N-alkylat
phosphonic acid (I)
Me₂SO, in alk soln r
P analogue of betain
Et₂SO, reacts with I
products of incomple

USSR/Chemistry - I

Studied some prop
compds. Condittio
betaine and II ar
being caused by d
group and diffren



MEDVED', T. Ya.

MEDVED, T. Ya.

4
② chem.

Chemical Abst.

The reaction of phosphorus trichloride with cyclic un-
saturated ketones. Ch. I. Kabachnik and T. Ya. Medved.
Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci. 1952, 517-22
(Engl. translation).—See C.A. 47, 4848b. H. L. H.

MEDVED, T. Ya.

Chem Abs 148
1-25-54

Organic Chemistry

~~Aminomethylphosphonic acid M. I. Kabachnik and T. Ya. Medved. Akad. Nauk S.S.S.R., Inst. Org. Khim., Sintezy Org. Soedinenii, Sbornik 2, 12-14 (1952); C. C.A. 45, 8444b; 46, 421c; Chavane, C.A. 43, 124b.—Heating 50 g. $\text{ClCH}_2\text{P}(\text{O})(\text{OEt})_2$ and 240 ml. 25% NH_4OH in sealed tubes 1 hr. at 150° (the tubes are best heated in an autoclave or bomb with suitable counterpressure of about 25-30 atm. to prevent rupture) and evapn. of the contents on a steam bath gave a sirup. This, in small vol. of H_2O was shaken with 35 g. fresh moist Ag_2O and filtered. The filtrate was freed of Ag with H_2S , filtered and the filtrate and wash H_2O combined and evapd. to constant vol. The yellowish residue was taken up in small vol. of 95% EtOH and treated with EtOH soln. of 54 g. PhNH_2 (2 moles per mole of original ester). After prolonged standing a part of $[\text{H}_2\text{NCH}_2\text{P}(\text{O})(\text{OEt})_2]$.~~

MEDEVYED', T. Ya.

USSR/Chemistry - Or

"The Reaction of Ph
Unsaturated Ketones
Inst of Org Chem, A

"Iz Ak Nauk, Otdel

PCl₃ adds to cyclic
polyols, cyclic β - δ
Cyclic β -ketophosph
are obtained by add
 β -unsatd ketones w/

the ester which is
phosphonic acids a
ketones refutes Co
of the addn reacti

MEDVED', T. Ya.

USSR/Chemistry - Organo-Phosphorus
Compounds

11 Apr 52

"A New Method of Synthesizing alpha-Aminophosphonic
Compounds" T. Ya. Medved'

MEDVED, T. Ye

USSR

New method of synthesis of α -aminoalkylphosphonic acids. T. M. F. Kabachnik and T. Ye. Medved. Bull. Acad. Sci. U.S.S.R. Div. Chem. 6:1244-1247 (1967) (Engl. translation).—See C.A. 49, 840c. H. L. H.

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001033220012-7

NEEDVED, I.E.A.

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001033220012-7"

MEDVED, T. YA.

Some derivatives of (aminoethyl)phosphonic acid.
 M. I. Kabachnik and T. Ya. Medved (*Dokl. Akad. Nauk S.S.S.R.*, Moscow) *Izv. Akad. Nauk S.S.S.R., Ser. Khim. Nauk* 1953, 1126-8; cf. *C.A.* 46, 7996g.
 Acetylation of $H_2NCH_2PO_3H_2$ (I) is much more difficult than is that of glycine. Heating 0.9 g. I in 8 ml. Ac_2O 2.5 hrs. on a steam bath, distg. off Ac_2O *in vacuo*, treating the residue with hot MeOH, and concg. and cooling the MeOH ext. gave 57% $AcNHCH_2PO_3H_2$, m. 185° (from MeOH);

heated 6 hrs. in a sealed tube to 200-20° (best done by placing the tubes in an autoclave in which is maintained 40 atm. pressure) gave after evapn. 82% *betaine iodide*, m. 220° (from MeOH), which is formulated as $Me_4NCH_2PO_3H_2 \cdot I^-$. $1/3H^+$: acidimetric titration of the substance with phenolphthalein corresponds to that of a tribasic acid. The product (3.7 g.) shaken in H_2O with excess fresh Ag_2O , filtered, and the filtrate treated with H_2S , filtered, and evapd. gave 1.35 g. (87%) free *betaine*, $C_2H_5NPO_3$, m. 247°.

PO_2H , yielding 1.3 g. ppt., m. 157° (unfiltered by crystals from EtOH), which was identified as $\text{C}_6\text{H}_5\text{CONHCN}$, PO_2H , PANH . I (1.1 g.) and 1.5 g. $\text{o-C}_6\text{H}_4(\text{CO})_2\text{O}$ fused together by careful heating, the cooled melt extrd. with hot EtOH, and the soln. filtered from residual I and evapd. gave 0.8 g. (33%) $\text{o-C}_6\text{H}_4(\text{CO})_2\text{NHCN}$, PO_2H , m. $280-5^\circ$. I (1 g.) and 3 ml. MeI heated in sealed tube 6 hrs. at $200-20^\circ$ failed to react. I (2 g.), 6 ml. MeI, and 6 ml. MeOH

earlier (cf. *C.A.* 46, 7006c). I (1 g.), 0.4 ml. MeI (20% of theory), and 6 ml. MeOH heated in a sealed tube 6 hrs. at $200-20^\circ$ and evapd. gave 1.2 g. (62%) of the same betaine iodide, m. 220° , as described above. The result indicates that the HI liberated in the methylation of the amino group reacts with MeOH, forming more MeI. In the absence of MeI, the reaction does not proceed.

G. M. Kosolapoff

MEDVED, T. YA.

USSR/ Chemistry - Synthesis methods

Card 1/1 : Pub. 40 - 14/22

Authors : Kabachnik, M. I., and Medved', T. Ya.

Title : New method of synthesizing alpha-aminoalkylphosphinic acids. Part 1.-

MEDVED, T. Ya.

MEDVED', T. Ya.

MEDVED', T.Ya.; KABACHNIK, M.I.

New synthesis of aminophosphinic acids. Report no.2. Reaction of ketones with dialkylphosphites and ammonia. Izv.AN SSSR. Otd.khim.nauk no.2:314-322 Mr-Ap '54. (MLRA 7:6)

1. Institut organicheskoy khimii im. N.D.Zelinskogo Akademii nauk SSSR.

(Ketones) (Phosphites) (Ammonia) (Phosphinic acid)

MEVED', T. YA.

USSR/ Chemistry - Synthesis

Card 1/1 Pub. 40 - 11/27

Authors Kabachnik, M. I., and Medved', T. Ya.

Title New method for the synthesis of alpha-aminoalkylphosphinic acids. Part 4

MEDVED, T. YA.

USSR/Biology - Plant pathology

Card 1/1 Pub. 22 - 40/47

Authors : Ryzhkov, V. L.; Kabachnik, M. I., Memb. Corresp. of Acad. of Sc. USSR;
Tarasevich, L. M.; Medved', T. Ya.; Zeytlenok, N. A.; Marchenko, N. K.;
Vagzhanova, V. A.; Ulanova, E. F.; and Cheburkina, N. V.

... of alpha-aminobenzoic acids

USSR/ Chemistry - Synthesis

Card 1/1 Pub. 22 - 26/56

Authors : Kabachnik, M. I., Memb. Corresp. of Acad. of Sc. USSR.; and Medved', T. Ya.

Title : Derivatives of amino alkyl phosphinic acids. Reaction of amino alkyl phosphinic acid and thiophosphinic acid esters with arylisocyanates

MEDVED, T. V.

Synthesis and study of properties of aminoalkylphosphonic acids. T. V. Medved (Inst. Heteroorganic Compds., Acad. U.S.S.R., Moscow). *Khim. i Prikladn. Biokhimiya*, 1957, 1, 1-4. (Pub. 1957).—Summary and review, primarily of author's work with Kabachnik on amino phosphonic acids. 28 references. G. M. Kasalov.

Medved, T. Ya.

June

~~Acylation of (aminoalkyl)phosphonic acids and (aminoalkyl)phosphonic acids. T. Ya. Medved and M. I. Kabachnik (Inst. Heteroorg. Compd. Acad. Sci. U.S.S.R. Moscow). Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk 1955, 1043-7. —Addn. of 0.76 g. Ac₂O to 0.97 g. H₂NCH₂PO(OEt)₂ caused a temp. rise to 70°; after it had cooled, the mixt. was kept 15 min. on a steam bath, and the Ac₂O then distd. *in vacuo*, leaving 82% AcNHCH₂PO(OEt)₂, m. 96-7° (from petr. ether). Similarly were prepd. 83% AcNHCH₂PhPO(OEt)₂, m. 144° (from EtOH), and 66% AcNHCH₂PhPS(OEt)₂, b. 116-17°, m. 47-8°. Heating 3.14 g. H₂NCH₂PO₂H₂ (monohydrate, m. 256°) and 15 g. Ac₂O on a steam bath until soln. took place (1-2 hrs.)~~

9

M.A. YOUTZ
2 copies

Medved, T. Ya

8

1/2

the acids and their
 Kobachnik Cust.
 S.S.S., Moscow.
 1. Melt 1955-1918-
 ml, H₂O made alk.
 g. Me₂SO, over 3-4
 l, neutralized after 1
 by the residue extd.
 residue again extd.
 2nd ext. evapd., the
 extd. with 1:1 acid
 the residual sulfate.
 the filtrate evapd.,
 evapd., the residue
 with Ag₂O, heated on
 ated with H₂S, the
 led after standing 2
 O, decomp. 230-1°
 contains an acidic
 sin it can be titrated
 eating 1 with Me₂
 and H₂PO₄. Heating
 sealed tube 9 hrs. at
 ave. an undistillable
 l with Ag₂O, filtered,
 upd., and the residue
 ° (from abs. EtOH),
 l-Et ester (1.95 g.)
 Me₂ and allowed to
 l, C(NHMe.H)PO-
 ich with 5% NaOH
 10(OEt), b. 77-81°
 l, 4.4 g. 40% formic
 steam bath, then 40
 n EtOH-H₂O (70%)

5

MEDEV, T. YA. KUBACHNIK, M. I.

gave 79.6% $M_2N_2C_2H_4PO_3H_2$, decomp. 220-3°, irritating,
as a monobasic acid to phenolphthalein. Similarly 2.5 g.
 $H_2NCH_2PhPO_3H_2$, 2 g. formalin, and 1.6 g. 77% HCO_2H
gave 28% $M_2N_2CH_2PhPO_3H_2$, m: 230° (decompn).
G. M. Kosolapoff

2/2
DM
JBL

MOVVED, T.

"Syntheses and Studies of Ir Vertles of Aminobenzitrone
and presented at No First Conference on High Energy Chemistry,
Kazan, 3-1 Dec 56

to write"

Medved, T. Ya.

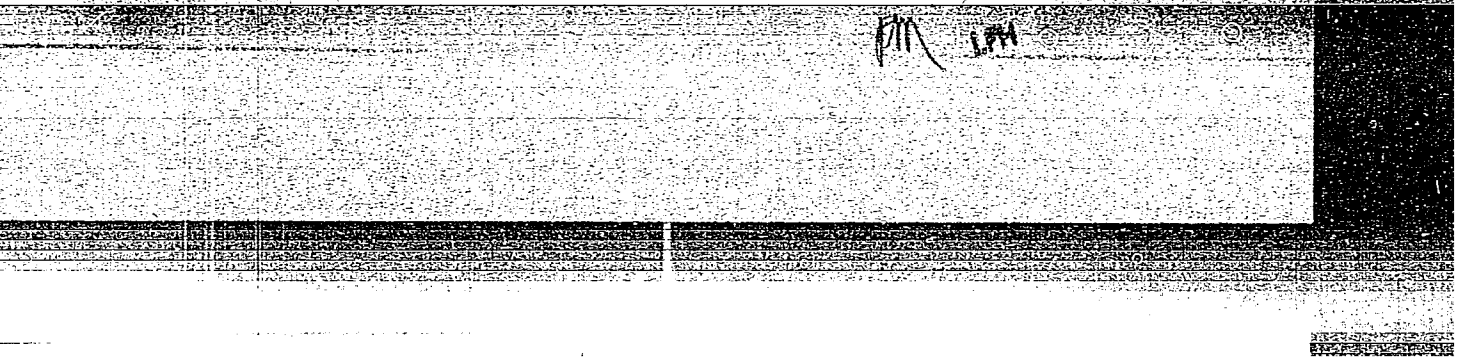
IV Derivatives of α -aminoalkylphosphonic acids. Esters of α -isocyanatoalkylphosphonic acids and their transformations. T. Ya. Medved and M. I. Kabachnik (Inst. Heteroorg. Chem., Acad. Sci. U.S.S.R., Moscow). Izv. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk 1936, 684-91.

To 19 g. COCl_2 in 40 ml. MePh at -5° was added 14.7 g. $(\text{EtO})_2\text{P}(\text{O})\text{CMe}_2\text{NH}_2$ in 15 ml. MePh over 1 hr.; after stirring 4 hrs. at about 5° , the mixt. was left overnight at room temp. yielding a ppt. of 9.7 g. $(\text{EtO})_2\text{P}(\text{O})\text{CMe}_2\text{NH}_2 \cdot \text{HCl}$, m. 140° , while the filtrate yielded 5.4 g. $(\text{EtO})_2\text{P}(\text{O})\text{CMe}_2\text{NCO}$; b₃ $75-7^\circ$, n_D²⁰ 1.4349, d₄ 1.1014, which is slowly decompd. by H_2O . Similarly was prepd. from 37 g. COCl_2

М. ДВЕР, Т. Я. АНО КИОРСНИК, М. И.
Heated 5 min. to 160° and cooled, yielding 71.5% DCNIP.
СМ. П. (С. Н. О. Е. Ш. в. 73-4". Identical with the above.

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APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001033220012-7"

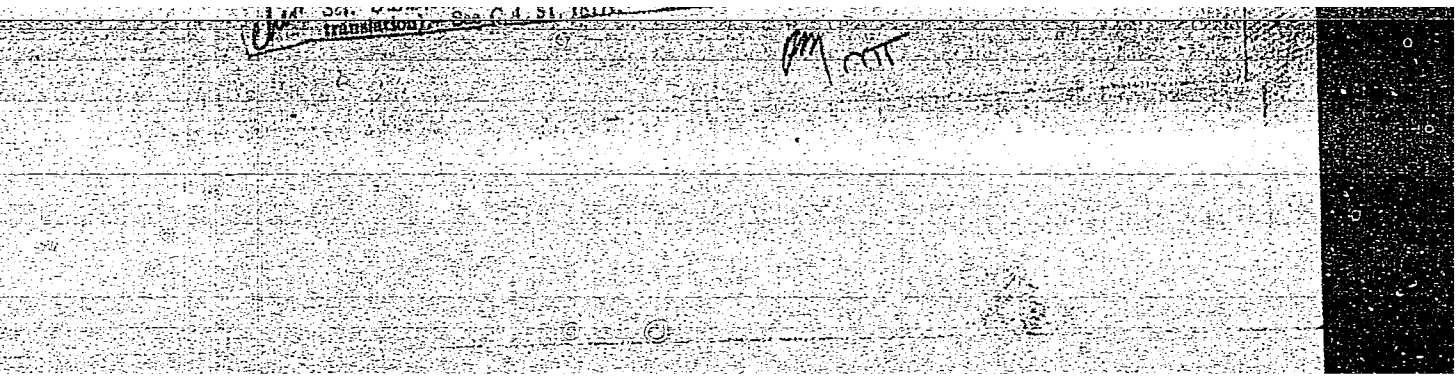
Molvent, T. Ya.

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Eaters of 2

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APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001033220012-7"

MEDVED' T.Ya.; KABACHNIK, M.I.

Acylation of aminoalkylphosphinic and aminoalkylthiophosphinic acids by chlorocarbonic esters. Izv.AN SSSR.Otd.khim.nauk no.3: 327-331 Mr '56. (MLRA 9:8)

1. Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR. (Phosphinic acid) (Formic acid) (Acylation)

MEDVED', T.Ya.; KABACHNIK, M.L.

Derivatives of α -aminoalkylphosphinic acids. Esters of α -isocyanatoalkylphosphinic acids and their conversions. Izv. AN SSSR. Otd. khim. nauk no. 6: 684-691 Je '56. (MIRA 9:9)

1. Institut elementoorganicheskikh soedineniy Akademii nauk SSSR.
(Phosphinic acid)

MEDVED*, T. Ya. (Inst. Elementary Organic Compounds AS USSR)

"Synthesis and Study of the Properties of Aminoalkylphosphinic Acids" (Sintez i issledovaniye svoystv aminalkilfosfinovykh kislot)

Chemistry and Uses of Organophosphorous Compounds
(Soyedneniya i primeneniye organofosfornykh soedineniy),

Medved, T. Ya

AUTHORS: Medved', T. Ya., Kabachnik, M. I.

62-11-9/29

TITLE: Synthesis of Aminoalkylphosphonic Acids (Sintez aminoalkilfosfinovykh kislot) Reaction of Some Heterocyclic Ketones with Dialkylphosphites and Ammonia (Reaktsiya nekotorykh geterotsiklicheskikh ketonov s dialkilfosfitami i ammiakom)

PERIODICAL: Izvestiya AN SSSR, Otdelenie Khimicheskikh Nauk, 1957, Nr 11, pp. 1357-1362 (USSR)

Synthesis of Aminoalkylphosphonic Acids. Reaction of Some Heterocyclic
Ketones with Dialkylphosphites and Ammonia. 62-11-9/29

was applied:
influence of dialkylphosphites on ketones under presence of so-
dium-alcoholate. There are 4 Slavic references.

ASSOCIATION: Institute for Element-Organic Compounds of the AN JSSR (In-
stitut elementoorganicheskikh soyedineniy Akademii Nauk SSSR)

AUTHORS: Kabachnik, M. I., Medved', T. Ya., SOV, 62-38-9-8, 26
Kozlova, G. K., Balabukha, V. S., Senyavin, M. M.,
Tikhonova, L. I.

TITLE: Synthesis and **Testing** of the Complex-Forming Properties
of Several Organophosphorus Compounds (Sintez i ispytaniya
kompleksoobrazuyushchey sposobnosti nekotorykh fosfororga-

Synthesis and ~~Testing~~ of the Complex-Forming Properties of Several Organophosphorus Compounds SOV/62-58-7-2/26

ethylenediamine and dialkyl phosphites and aldehydes (or ketones), esters of ethylenediaminodialkylphosphinic acids form. By saponifying these esters the free acids can be obtained. The complexing properties of the

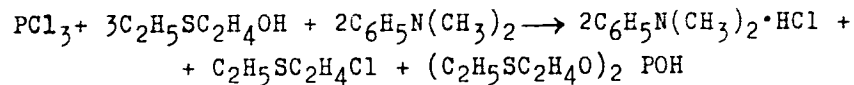
AUTHORS: Medved' , T. Ya., Kabachnik, M. I. SOV/62-58-10-9/25

TITLE: β -Ethyl Mercapto Ethyl Phosphites and Some of Their
Properties (β -etilmerkaptoetilfosfity i nekotoryye ikh
svoystva)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,
1958, Nr 10, pp 1212-1218 (USSR)

β -Ethyl Mercapto Ethyl Phosphites and Some of
Their Properties

SOV/62-58-10-9/25



Similar to this synthesis of di- β -ethyl mercapto ethyl phosphite the ethyl- β -ethyl mercapto ethyl phosphite could be produced. Some properties of the synthesized β -ethyl

β -Ethyl Mercapto Ethyl Phosphites and Some of
Their Properties

SOV/62-58-10-9/25

ASSOCIATION: Institut elementoorganicheskikh sovedineniy Akademii nauk
SSSR
(Institute of Elementary Organic Compounds, Academy of
Sciences, USSR)

5.3630

77070
SOV/62-59-12-14/43

AUTHORS: Kabachnik, M. I., Medved', T. Ya.

TITLE: Vinylphosphonic Acid and Some of Its Derivatives

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh
i 1962, No. 10, pp. 2110-2115 (USSR)

vinylphosphonic Acid and Some of Its Derivatives

77070

SOV/62-59-12-14/43

(1×10^{-4} mm); n_D^{20} 1.5571. The acid dichloride and trimethylene glycol, in the presence of triethylamine, form the cyclic trimethylene ester, in 53% yield; bp

129-130° (2 mm); n_D^{20} 1.4775. Diethyl vinylphosphonate

Vinylphosphonic Acid and Some of Its Derivatives

77070

SOV/62-59-12-14/43

1 U.S., 1 U.K. The U.S. and U.K. references are: G. M. Kosolapoff, J. Am. Chem. Soc., 70, 1971 (1948); A. Kinner, E. Perren, J. Chem. Soc., 3437 (1952).

ASSOCIATION:

Institute of Elementoorganic Compounds, Academy of Sciences, USSR (Institut elementoorganicheskikh

S/020/60/135/004/022/037
B016/B062

AUTHORS: Kabachnik, M. I., Academician, Medved', T. Ya., and
Polikarpov, Yu. M.

TITLE: Phosphine Oxides Containing the Vinyl Group at the Phos-
phorus Atom

Phosphine Oxides Containing the Vinyl Group
at the Phosphorus Atom

S/020/60/135/004/022/037
B016/B062

dity of this reaction for compounds of the type PCl_3 , $RPCl_2$, and R_2PCl .
They proved that the β -chloro-ethyl ester of diethyl phosphinous acid is,
when heated, converted into compounds of pentavalent phosphorus. The
authors succeeded in isolating the two products of the regrouping of
Arbuzov (not explained in the text) at the same time: a) β -chloro-ethyl

Phosphine Oxides Containing the Vinyl Group
at the Phosphorus Atom

S/020/60/135/004/022/037
B016/B062

oxide. Mention is made of a paper by M. I. Kabachnik, Chzhan Zhun-yuy, and Ye. N. Tsvetkov (Ref. 9). Table 1 contains the formulas of the synthesized compounds I - IX with constants and yields. There are 1 table and 11 references: 10 Soviet and 1 US.

Институт элементоорганических соединений Академии наук

89908

S/062/61/000/002/004/012
B115/B207

5 3630

2209, 1287, 1153

AUTHORS:

Medved', T. Ya. and Kabachnik, M. I.

TITLE:

Organophosphorus monomers. Report no. 2. α -Chloro-
and α -bromo vinyl phosphonic acids and their derivatives

89908

S/062/61/000/002/004/012
B115/B207

Organophosphorus monomers. Report ...

The aniline salt of this acid melts at 194-195°C. While the authors tried to obtain an anilide of this acid, a dehydrobromination occurred, and a dianilide of α -bromo vinyl phosphonic acid was separated. In

89933

S/062/61/000/002/004/0*2
B115/B207

Organophosphorus monomers. Report ...

apart from the addition of chlorine to the double bond, and the formation of α,β -dichloro ethyl phosphonic acid dichloride, a separation of hydrogen chloride and simultaneous formation of α -chloro vinyl phosphonic acid dichloride. The two acid chlorides were obtained in

89908

S/062/61/000/002/004/012
B115/B207

Organophosphorus monomers. Report ...

vinyl phosphonic acid were obtained from the reaction of α -chloro vinyl phosphonic acid dichloride with alcohols. By interaction of the ethyl ester with aniline, the dianilide of this acid was obtained. In

158050

2F177

S/190/61/003/007/021/021
B00/B230

AUTHORS: Tsetlin, B. L., Medved', T. Ya., Chikishev, Yu. G., Poli-
karpov, Yu. M., Rafikov, S. R., Kabachnik, M. I.

TITLE: Radiation polymerization of tertiary monovinylphosphine ox-
ides

S/190/61/003/007/021/021
B/C/3330

Radiation polymerization of

this type of initiators, either not polymerized at all, or their polymerization proceeded at an extremely low rate with very poor yield (Ref 2, see below). Authors conducted experiments to initiate polymerization of diethylvinylphosphine oxide (I) and diphenylvinylphosphine oxide (II) by radiation. As source of radiation an X-ray irradiation apparatus was

Radiation polymerization of...

25277

S/190/61/003/007/021/021
B101/B230

reprecipitated polymer (II) is about 180°C (determined by thermomechanical method, Ref. 3: B. L. Tsetlin, V. I. Gavrilov, N. A. Velikovskaya, V. V. Kochkin, Zavodsk. lab., 22, 352, 1956). It has been proved hereby that the radiation polymerization is an efficient method to obtain polymers on the basis of oxides of monovinylphosphines. Mechanism of the process is being studied at present. [Abstracter's note: Complete translation]

22515

158114

2209

S/062/61/000/004/004/008
B118/B208

AUTHORS: Kabachnik, M. I. and Medved', T. Ya.

TITLE: Organophosphorus monomers. 3. Vinyl thiophosphinic acid and
some of its derivatives

22515

S/062/61/000/004/004/008
B118/B208

Organophosphorus monomers. ...

thiophosphinic acid (III) obtained by hydrolysis of the acid dichloride is
sirupy. Its aniline salt melts at 105-106° with decomposition. The acid
dichloride (II) gives with aniline the dianilide of the acid
dichloride (II) with

22515

S/062/61/000/004/004/008
B118/B208

Organophosphorus monomers. ...

$\text{CH}_2\text{---CHPO}(\text{OC}_2\text{H}_5)(\text{SC}_2\text{H}_4\text{SC}_2\text{H}_5)$ (XII); compound (IX) (as well as its isomer-
ization product (XII)) add an alcohol molecule, when heated with alcohol
in the presence of sodium methylate, and form the corresponding ester of
ethoxy-ethyl thiophosphinic acid

X

53630

29521
S/062/61/000/011/008/012
B103/B147

AUTHORS: Kabachnik, M. I., Medved', T. Ya., Polikarpov, Yu. M., and
Yudina, K. S.

TITLE: Synthesis of diphenyl-vinyl phosphine oxide

29521

S/062/61/000/011/000,011

B103/B147

Synthesis of diphenyl-vinyl phosphine..

to diphenyl-chloro phosphine was effected by catalytic disproportionation of the former in the presence of $AlCl_3$ and constant distilling off of the PCl_3 formed. The yield in diphenyl-chloro phosphine was 70%. This method is simple and gives easily reproducible results. Ditolyl-chloro-phosphine

29521

S,062/61/000/011/008/012
B103/B147

Synthesis of diphenyl-vinyl phosphine...

Polikarpov, Dokl. AN SSSR, 135, 849 (1960)). Isomerization of the
β-chloroethyl ester of diphenyl-phosphinous acid yields not only the
products mentioned but also (a) owing to spontaneous dehydrochlorination.

MEDVED', T. YA.



43

PHASE I BOOK EXPLOITATION

SOV/6034

Konferentsiya po khimii i primeneniyu fosfororganicheskikh soyedineniy. 2d, Kazan', 1959.

Khimiya i primeneniye fosfororganicheskikh soyedineniy; trudy (Chemistry and Use of Organophosphorus Compounds; Conference Transactions) Moscow,

43

Chemistry and the Use of Organophosphorus (Cont.)

SOV/6034

Organophosphorus Compounds held at Kazan' from 2 Nov through 1 Dec 1959. .
The material is divided into three sections: Chemistry, containing 67 arti-
cles; Physiological Activity of Organophosphorus Compounds, containing 26
articles; and Plant Protection, containing 12 articles. The reports reflect

Chemistry and the Use of Organophosphorus (Cont.)

SOV/6034

Andreyeva, M. A., I. A. Gribova, M. I. Kabachnik, G. S. Kolesnikov,
V. V. Korshak, T. Ya. Medved', Yu. M. Polikarpov, Ye. F. Rodionova,
and L. S. Fedorova [Institute of Organoelemental Compounds]. Some
Methods of Synthesis of New Organophosphorus Monomers and Polymers 263
This study attempts to develop new methods of synthesis of organo-

MEDVED', T.YA., KABACHNIK, M.I., MOSHVIN, P.A., VARSHAVSKIY, S.I.
KOFMAN, L.P., GEFTER, YE.L., TKACHENKO, G.V., DANILEVICH, A.A.

Industrial method of synthesis of di-B,B chlor-ethyl of vinyl-
phosphinic acid from ethylene oxide and phosphorus trichloride.

Report submitted for the 12th Conference on high molecular weight compounds
devoted to monomers. Baku. 3-7 April 62

3

S/081/62/000/023/119/120
B117/B186

5 3530

AUTHORS: Andreyeva, M. A., Gribova, I. A., Kabachnik, M. I.,
Kolesnikov, G. S., Korshak, V. V., Medved', T. Ya.,
Polikarpov, Yu. M., Rodionova, Ye. F., Fedorova, L. S.

TITLE: Some methods of synthesizing new organophosphorus monomers

41854

S/204/62/002/004/019/019
E075/E436

11 2200
5.3636
AUTHORS:

Kabachnik, M.I., Geftter, Ye.L., Moshkin, P.A.,
Medved', T.Ya.

TITLE:

Phosphororganic monomers. Review paper

PERIODICAL: Neftekhimiya, v.2, no.4, 1962, 639-651

Phosphororganic monomers

S/204/62/002/004/019/019
E075/E436

of (I). Treatment of (II) with PCl_5 gives $\text{ClCH}_2\text{CH}_2\overset{\text{P}}{\underset{\text{O}}{\parallel}}\text{Cl}_2$
which can be used for the synthesis of amides and esters of
 β -chloroethylphosphorous acids. Removal of water from (II) with
alcoholic alkalis, or heating over BaCl_2 gives $\text{CH}=\text{CH}$

Phosphororganic monomers

S/204/62/002/004/019/019
E075/E436

until recently the only available method for their preparation. The phosphines polymerize easily by ionic or radical mechanism. At the present time the polymerization of vinyl-diethyl and vinyl-diphenylphosphines is being investigated under the action of X-ray and chemical initiators. In general, the vinyl-phosphonate compounds can polymerize.

KOLESNIKOV, G.S.; RODIONOVA, Ye.F.; FEDOROVA, L.S.; MEDVED', T.Ya.;
KABACHNIK, M.I.

Carbochain polymers and copolymers. Part 41: Synthesis,
polymerization, and copolymerization of vinylphosphinic
amides. Vysokom.soed. 4 no.9:1385-1389 S '62. (MIRA 15:11)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Phosphinic amide)

KABACHNIK, M.I.; MEDVED', T.Ya.; POLIKARPOV, Yu.M.; YUDINA, K.S.

Reactions of vinyl-diphenylphosphine oxide. *Izv. AN SSSR. Otd. khim.*
nauk no.9:1584-1589 S '62. (MIRA 15:10)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Phosphine oxide)

KABACHNIK, M.I.; MEDVED', T.Ya.

Synthesis of methylenediphosphine oxide. *Izv. AN SSSR. Otd.khim.*
nauk no.11:2103-2104 N '62. (MIRA 15:12)

1. Institut elementoorganicheskikh soyedineniya AN SSSR.
(Diphosphine)

S/079/62/032/010/004/008
D204/D307

AUTHORS: Popov, Ye.M., Tsvetkov, Ye.N., Chang, Jung-Yfi, and
Medved', T.Ya.

TITLE: Raman and ultraviolet spectra of some unsaturated
organic compounds of phosphorus

Raman and ultraviolet spectra of ...

S/079/62/032/010/004/008
D204/D307

nal = CH₂ group, and the UV spectra of CH₂ = CH - C₄H₉ and CH₂ =
= CH - CH₂ - (O)P(OC₄H₉)₂ were practically the same, indicating that
in these compounds there is practically no interaction between the ✓

ACCESSION NR: AT4033994

S/0000/63/000/000/0117/0122

AUTHOR: Korshak, V.V.; Gribova, I.A.; Andreyeva, M.A.; Kabachnik, M.I.;
Medved', T. Ya.

TITLE: Polymers containing phosphorus. XXXIX. Heterocyclic polyesters of vinly-
lithic acid and some glycols

ACCESSION NR: AT4033994

Yields ranged from 23.2% for VI to 88.6% for II, indicating that penta-cyclic esters are the most suitable. Structural modification of the synthesized polyesters was then attempted by the use of radical polymerization catalysts (benzoyl peroxide, tert.-butyl peroxide, tert.-butyl hydroperoxide and metallic Na; 0.5 to 3.0% by weight, 55-90C, 10-51 hours). The polymers obtained were solids or similar to factice rubber with

ACCESSION NR: AT4033994 - Cyclic esters of vinylphosphinic acid

ENCLOSURE: 01

TABLE 1

Chemical formula	B.P., °C/mm	20 n _D	20 d ₄	MR _D		C, %		H, %		P, %		Yield %
				Found	Calcu- lated	Found	Calcu- lated	Found	Calcu- lated	Found	Calcu- lated	

KOLESNIKOV, G.S.; RODIONOVA, Ye.F.; FEDOROVA, L.S.; MEDVED', T.Ya.;
KABACHNIK, M.I.

Carbochain polymers and copolymers. Part 43: Synthesis,
polymerization, and copolymerization of aromatic esters of
vinylphosphinic and α -chlorovinylphosphinic acids. Vysokom.
soed. 5 no.1:32-38 Ja '63. (MIRA 16:1)

1. Institut elementoorganicheskikh soedineniy AN SSSR.
(Phosphinic acid) (Polymerization)

KABACINIK, M.I. [Kabachnik, M.I.]; CHEFTER, E.L.; MOSKIN, P.A. [Moshkin,
P.A.]; MEDVED, T.I. [Medved', T.Ya.]

Organophosphoric monomers. Analele chimie 18 no.3:62-76 J1-S '63.

MEDVED', T.Ya.; FRUNZE, T.M.; KHU CHIN-MEY; KURASHEV, V.V.; KORSHAK, V.V.;
KABACHNIK, M.I.

Organophosphorus polyamides based on methyl-di-(*m*-aminophenyl)phosphine oxide. Vysokom.sped. 5 no.9:1309-1314 S '63. (MIRA 17:1)

1. Institut elementoorganicheskikh soedineniy AN SSSR.

1 22658-65

EPR(E)/EPR/EPA(s)-2/EWP(j)/EWT(m)/T pc-4/pr-4/ps-4/pt-10 JAJ/RM/WM/MLK

ACCESSION NR: AT5002111

S/0000/64/000/000/0063/0066

AUTHOR: Korshak, V.V.; Frunze, T.M.; Kurashev, V.V.; Medved', T.Ya.;
Polikarpov, Yu. M.; Hu, Ch'ing-mei; Kabachnik, M.I.

TITLE: Synthesis of certain phosphorus-containing monomers

Sintez i svoystva monomerov

L 22658-65

ACCESSION NR: AT5002111

or polyhexamethylsebacamide. The polyamides containing phosphorus showed good flame resistance. In addition, they can be used for the same applications as ordinary polyamides. Orig. art. has: 3 tables and 5 formulas.

ASSOCIATION: None

ARKHIPOVA, O.G.; KOCHETKOVA, T.A.; RUDOMINO, M.V.; MEDVED', T.Ya.; KABACHNIK,
M.I., akademik

Effect of aminoalkylphosphinic acids on experimental beryllium intoxication. Dokl. AN SSSR 158 no.5:1235-1237 0 '64.

(MIRA 17:10)

1. Institut gigiyeny truda i professional'nykh zabolevaniy AMN SSSR i Institut elementoorganicheskikh soyedineniy AN SSSR.

KABACHNIK, M.I.; BALUYEVA, G.A.; MEDVED', T.Ya.; TSVETKOV, Ye.N.; CHZHAN ZHUN-YUY [Chang Jung-ju]

Kinetics and mechanism of bromination of vinylphosphinic acid derivatives.
Kin. i kat. 6 no.2;212-220 Mr-Apr '65. (MIRA 18:7)

1. Institut elementoorganicheskikh soedineniy AN SSSR.

I 30039-65 EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/EPR/EWP(j)/T Pa-4/Pr-4/Ps-4/Pt-10/
Pu-4 GG/RM/WH

ACCESSION NR: AP5003825

S/0190/65/007/001/0033/0038

AUTHORS: Chikishev, Yu. G.; Tsetlin, B. L.; Rafikov, S. R.; Pelikarpov, Yu. M.;
Medved', T. Ya.; Kabachnik, M. I.

TITLE: Radiation polymerization of diphenylvinylphosphine oxide in a melt

59
57

L 30039-65

ACCESSION NR: AP5003825

2

for the reprecipitated polymer and 16-24000 for the distilled polymer. The thermo-
mechanical compression curves for the polymer are shown in Fig. 1 on the Enclosure,
and the infrared absorption curves for the polymer and monomer are shown in Fig. 2
on the Enclosure. It was found that the yield changed linearly with time, showing
different slopes for different irradiation intensities (10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000, 1010, 1020, 1030, 1040, 1050, 1060, 1070, 1080, 1090, 1100, 1110, 1120, 1130, 1140, 1150, 1160, 1170, 1180, 1190, 1200, 1210, 1220, 1230, 1240, 1250, 1260, 1270, 1280, 1290, 1300, 1310, 1320, 1330, 1340, 1350, 1360, 1370, 1380, 1390, 1400, 1410, 1420, 1430, 1440, 1450, 1460, 1470, 1480, 1490, 1500, 1510, 1520, 1530, 1540, 1550, 1560, 1570, 1580, 1590, 1600, 1610, 1620, 1630, 1640, 1650, 1660, 1670, 1680, 1690, 1700, 1710, 1720, 1730, 1740, 1750, 1760, 1770, 1780, 1790, 1800, 1810, 1820, 1830, 1840, 1850, 1860, 1870, 1880, 1890, 1900, 1910, 1920, 1930, 1940, 1950, 1960, 1970, 1980, 1990, 2000, 2010, 2020, 2030, 2040, 2050, 2060, 2070, 2080, 2090, 2100, 2110, 2120, 2130, 2140, 2150, 2160, 2170, 2180, 2190, 2200, 2210, 2220, 2230, 2240, 2250, 2260, 2270, 2280, 2290, 2300, 2310, 2320, 2330, 2340, 2350, 2360, 2370, 2380, 2390, 2400, 2410, 2420, 2430, 2440, 2450, 2460, 2470, 2480, 2490, 2500, 2510, 2520, 2530, 2540, 2550, 2560, 2570, 2580, 2590, 2600, 2610, 2620, 2630, 2640, 2650, 2660, 2670, 2680, 2690, 2700, 2710, 2720, 2730, 2740, 2750, 2760, 2770, 2780, 2790, 2800, 2810, 2820, 2830, 2840, 2850, 2860, 2870, 2880, 2890, 2900, 2910, 2920, 2930, 2940, 2950, 2960, 2970, 2980, 2990, 3000, 3010, 3020, 3030, 3040, 3050, 3060, 3070, 3080, 3090, 3100, 3110, 3120, 3130, 3140, 3150, 3160, 3170, 3180, 3190, 3200, 3210, 3220, 3230, 3240, 3250, 3260, 3270, 3280, 3290, 3300, 3310, 3320, 3330, 3340, 3350, 3360, 3370, 3380, 3390, 3400, 3410, 3420, 3430, 3440, 3450, 3460, 3470, 3480, 3490, 3500, 3510, 3520, 3530, 3540, 3550, 3560, 3570, 3580, 3590, 3600, 3610, 3620, 3630, 3640, 3650, 3660, 3670, 3680, 3690, 3700, 3710, 3720, 3730, 3740, 3750, 3760, 3770, 3780, 3790, 3800, 3810, 3820, 3830, 3840, 3850, 3860, 3870, 3880, 3890, 3900, 3910, 3920, 3930, 3940, 3950, 3960, 3970, 3980, 3990, 4000, 4010, 4020, 4030, 4040, 4050, 4060, 4070, 4080, 4090, 4100, 4110, 4120, 4130, 4140, 4150, 4160, 4170, 4180, 4190, 4200, 4210, 4220, 4230, 4240, 4250, 4260, 4270, 4280, 4290, 4300, 4310, 4320, 4330, 4340, 4350, 4360, 4370, 4380, 4390, 4400, 4410, 4420, 4430, 4440, 4450, 4460, 4470, 4480, 4490, 4500, 4510, 4520, 4530, 4540, 4550, 4560, 4570, 4580, 4590, 4600, 4610, 4620, 4630, 4640, 4650, 4660, 4670, 4680, 4690, 4700, 4710, 4720, 4730, 4740, 4750, 4760, 4770, 4780, 4790, 4800, 4810, 4820, 4830, 4840, 4850, 4860, 4870, 4880, 4890, 4900, 4910, 4920, 4930, 4940, 4950, 4960, 4970, 4980, 4990, 5000, 5010, 5020, 5030, 5040, 5050, 5060, 5070, 5080, 5090, 5100, 5110, 5120, 5130, 5140, 5150, 5160, 5170, 5180, 5190, 5200, 5210, 5220, 5230, 5240, 5250, 5260, 5270, 5280, 5290, 5300, 5310, 5320, 5330, 5340, 5350, 5360, 5370, 5380, 5390, 5400, 5410, 5420, 5430, 5440, 5450, 5460, 5470, 5480, 5490, 5500, 5510, 5520, 5530, 5540, 5550, 5560, 5570, 5580, 5590, 5600, 5610, 5620, 5630, 5640, 5650, 5660, 5670, 5680, 5690, 5700, 5710, 5720, 5730, 5740, 5750, 5760, 5770, 5780, 5790, 5800, 5810, 5820, 5830, 5840, 5850, 5860, 5870, 5880, 5890, 5900, 5910, 5920, 5930, 5940, 5950, 5960, 5970, 5980, 5990, 6000, 6010, 6020, 6030, 6040, 6050, 6060, 6070, 6080, 6090, 6100, 6110, 6120, 6130, 6140, 6150, 6160, 6170, 6180, 6190, 6200, 6210, 6220, 6230, 6240, 6250, 6260, 6270, 6280, 6290, 6300, 6310, 6320, 6330, 6340, 6350, 6360, 6370, 6380, 6390, 6400, 6410, 6420, 6430, 6440, 6450, 6460, 6470, 6480, 6490, 6500, 6510, 6520, 6530, 6540, 6550, 6560, 6570, 6580, 6590, 6600, 6610, 6620, 6630, 6640, 6650, 6660, 6670, 6680, 6690, 6700, 6710, 6720, 6730, 6740, 6750, 6760, 6770, 6780, 6790, 6800, 6810, 6820, 6830, 6840, 6850, 6860, 6870, 6880, 6890, 6900, 6910, 6920, 6930, 6940, 6950, 6960, 6970, 6980, 6990, 7000, 7010, 7020, 7030, 7040, 7050, 7060, 7070, 7080, 7090, 7100, 7110, 7120, 7130, 7140, 7150, 7160, 7170, 7180, 7190, 7200, 7210, 7220, 7230, 7240, 7250, 7260, 7270, 7280, 7290, 7300, 7310, 7320, 7330, 7340, 7350, 7360, 7370, 7380, 7390, 7400, 7410, 7420, 7430, 7440, 7450, 7460, 7470, 7480, 7490, 7500, 7510, 7520, 7530, 7540, 7550, 7560, 7570, 7580, 7590, 7600, 7610, 7620, 7630, 7640, 7650, 7660, 7670, 7680, 7690, 7700, 7710, 7720, 7730, 7740, 7750, 7760, 7770, 7780, 7790, 7800, 7810, 7820, 7830, 7840, 7850, 7860, 7870, 7880, 7890, 7900, 7910, 7920, 7930, 7940, 7950, 7960, 7970, 7980, 7990, 8000, 8010, 8020, 8030, 8040, 8050, 8060, 8070, 8080, 8090, 8100, 8110, 8120, 8130, 8140, 8150, 8160, 8170, 8180, 8190, 8200, 8210, 8220, 8230, 8240, 8250, 8260, 8270, 8280, 8290, 8300, 8310, 8320, 8330, 8340, 8350, 8360, 8370, 8380, 8390, 8400, 8410, 8420, 8430, 8440, 8450, 8460, 8470, 8480, 8490, 8500, 8510, 8520, 8530, 8540, 8550, 8560, 8570, 8580, 8590, 8600, 8610, 8620, 8630, 8640, 8650, 8660, 8670, 8680, 8690, 8700, 8710, 8720, 8730, 8740, 8750, 8760, 8770, 8780, 8790, 8800, 8810, 8820, 8830, 8840, 8850, 8860, 8870, 8880, 8890, 8900, 8910, 8920, 8930, 8940, 8950, 8960, 8970, 8980, 8990, 9000, 9010, 9020, 9030, 9040, 9050, 9060, 9070, 9080, 9090, 9100, 9110, 9120, 9130, 9140, 9150, 9160, 9170, 9180, 9190, 9200, 9210, 9220, 9230, 9240, 9250, 9260, 9270, 9280, 9290, 9300, 9310, 9320, 9330, 9340, 9350, 9360, 9370, 9380, 9390, 9400, 9410, 9420, 9430, 9440, 9450, 9460, 9470, 9480, 9490, 9500, 9510, 9520, 9530, 9540, 9550, 9560, 9570, 9580, 9590, 9600, 9610, 9620, 9630, 9640, 9650, 9660, 9670, 9680, 9690, 9700, 9710, 9720, 9730, 9740, 9750, 9760, 9770, 9780, 9790, 9800, 9810, 9820, 9830, 9840, 9850, 9860, 9870, 9880, 9890, 9900, 9910, 9920, 9930, 9940, 9950, 9960, 9970, 9980, 9990, 10000, 10010, 10020, 10030, 10040, 10050, 10060, 10070, 10080, 10090, 10100, 10110, 10120, 10130, 10140, 10150, 10160, 10170, 10180, 10190, 10200, 10210, 10220, 10230, 10240, 10250, 10260, 10270, 10280, 10290, 10300, 10310, 10320, 10330, 10340, 10350, 10360, 10370, 10380, 10390, 10400, 10410, 10420, 10430, 10440, 10450, 10460, 10470, 10480, 10490, 10500, 10510, 10520, 10530, 10540, 10550, 10560, 10570, 10580, 10590, 10600, 10610, 10620, 10630, 10640, 10650, 10660, 10670, 10680, 10690, 10700, 10710, 10720, 10730, 10740, 10750, 10760, 10770, 10780, 10790, 10800, 10810, 10820, 10830, 10840, 10850, 10860, 10870, 10880, 10890, 10900, 10910, 10920, 10930, 10940, 10950, 10960, 10970, 10980, 10990, 11000, 11010, 11020, 11030, 11040, 11050, 11060, 11070, 11080, 11090, 11100, 11110, 11120, 11130, 11140, 11150, 11160, 11170, 11180, 11190, 11200, 11210, 11220, 11230, 11240, 11250, 11260, 11270, 11280, 11290, 11300, 11310, 11320, 11330, 11340, 11350, 11360, 11370, 11380, 11390, 11400, 11410, 11420, 11430, 11440, 11450, 11460, 11470, 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Synthesis of β -ketophosphine oxides. Izv. AN SSSR. Ser. khim.
no.9:1707-1708 '65. (MIRA 18-9)

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M. V.; Belugin, Yu. F.

TITLE: Peculiarities of complex formation of phosphoorganic complexing agents

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having a double betaine structure. Complex formation with the cations Mg, Ca, Sr,
Cu, Ni, Co, Zn, Mn, Fe⁺³, Be, Y, La, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu
was studied. The pK values of the acids were determined. Formation of hydrogen
complexes was observed for a 1:1 composition of components with all cations with the
exception of the alkali earth cations. For Fe⁺³, Cr, Al, Mn, Th, and the rare earth
elements the formation of hydroxy complexes was observed. The rare earth elements

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