

"APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619230010-9

APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619230010-9"

LIMAR', T.F.; IVANOVA, K.A.; BULACHEVA, A.F.; SHYVUBM, A.S.; BEDNOVA, I.N.; MAKOVSKAYA, E.B.; SOLOMEINA, G.I.; DOLMATOV, Yu.D.; BOBYPENKO, Yu. Ya.; KOGAN, F.I.; KOVALENKO, P.N.; IVANOVA, T.I.; FOKIN, A.V.; KOMAROV, V.A.; SOROKHIN, I.N.; LAVYDOVA, S.M.; RAVDEL', A.A.; GORELIK, G.N.; DAUKSHAS, V.K. [Dauksas, V.]; PIKUNAYTE, L.A. [Pikunaitė, L.]; SHARIPOV, A.Kh.; SHABALIN, I.I.; STEPNOVA, G.M.; SHMIDT, Ya.V.; DUBOV, S.S.; STRUKOV, O.G.

Scientific research papers of the members of the All-Union Mendeleev Chemical Society (brief information). Zhur. VHKO 10 no.3:350-360 '65. (MIRA 18:8)

1. Donetskii filial Vsesoyuznogo nauchno-issledovatel'skogo instituta khimicheskikh reaktivov i sposobykh khimicheskikh veshchestv (for Limar', Uravera, Bulacheva). 2. Ural'skiy nauchno-issledovatel'skiy khimicheskiiy institut (for Shubin, Bednova, Makovskaya, Solomeina). 3. Chelyabinskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyekt'nogo instituta mineral'nykh pigmentov (Dolmatov, Bobyrenko). 4. Kostovskiy-na-Lonu universitet (for Kogan, Kovalenko, Ivanova). 5. Leningradskiy tekhnologicheskiiy institut imeni Lencoveta i Institut mineral'nykh pigmentov (for Ravdel', Gorelik). 6. Vil'nyusskiy gosudarstvennyy universitet imeni Kpsukasa (for Dauksas, Pikunayte). Nauchno-issledovatel'skiy institut neftekhimicheskikh proizvodstv (for Sharipov, Shabalin). 8. Tomskiy politekhnicheskiiy institut imeni Kirova (for Stepnova, Shmidt).

KOGAN, F.I.; KOVALENKO, P.N.; IVANOVA, Z.I.

Use of a spectrograph for determining indium and germanium  
impurities in tin. Ukr. khim. zhur. 30 no.4:395-398 '64.  
(MIRA 17:6)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

VAL'DMAN, A.V.; IVANOVA, Z.I.; KHARKEVICH, D.A.

Effect of diplocin on synapses in various segments of the reflex arch. Farm. i toks. 18 no.2:3-11 Mr-Apr '55. (MLRA 8:7)

1. Kafedra farmakologii (zav. -deystvitel'nyy chlen AMN SSSR prof. V.V.Zakusov) I Leningradskogo meditsinskogo instituta imeni I.P. Pavlova.

(MUSCLE RELAXANTS, effects,  
diplocin on synapses in various segments of reflex arch)  
(NERVOUS SYSTEM, effect of drugs on,  
muscle relaxant diplocin, on synapses in various segments  
in reflex arch)

*Ivanova, Z. I.*

Effects of some compounds on bronchial spasm under  
vagus nerve stimuli. Z. I. Ivanova (I. P. Pavlov Inst Med.  
Inst., Leningrad). *Mikrofil. TITAN* 18, No. 8, 39-44  
(1956).—In tests with decerebrated or narcotized cats, *MD*  
responses to stimuli: the central and peripheral ends of the  
cervical vagus nerve were affected as follows: urethan, no  
bronchial spasm up to the narcotic dose; central hyalate,  
intensified spasm (often with depressor action) under per-  
ipheral stimuli and lessened reflex spasm under central  
stimuli; medinal and barbital, spasm at 1/4 to 1/2 the nar-  
cotic dose (blocking action in the range of ganglion synap-  
ses); procaine, spasm from peripheral and central stimuli  
and weakening of depressor effect (cholinolytic action);  
atropine and tropacine block impulses to the bronchi in  
smaller doses than to the heart, as do also pentaphen and  
Et,NOH.  
Julian P. Smith

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RUSINA, O.N.; KOVALENKO, P.N.; IVANOVA, Z.I.

Potentiometric titration of copper and lead when present together.  
Zhur. anal. khim. 20 no.1:44-47 1965. (MIRA 18:3)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

GORDIYENKO, V.I.; KOVALENKO, P.N.; IVANOVA, Z.I.

Behavior of some solid electrodes during amperometric titration  
of manganese. Ukr. khim. zhur. 30 no.8:801-804 '67. (MIRA 17:11)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.



L 1166-66 EWT(m)/EPF(c)/EWP(j) DIAAP RM

ACCESSION NR: AT5023152

UR/2892/65/000/004/0078/0082

AUTHOR: Gusev, N. S. ; Ivanova, Z. M. ; Konstantinov, I. Ye.

TITLE: Anticoincidence gamma spectrometer with shielded scintillator

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Voprosy dozimetrii i zashchity ot izlucheniya, no. 4, 1965, 78-82

TOPIC TAGS: gamma spectrometer, scintillation spectrometer, shielding, gamma ray, cesium, zinc, particle counting

ABSTRACT: The article gives a schematic diagram of a modern gamma spectrometer with shielded scintillator. The crystal analyzer (NaI(Tl) and the photomultiplier are located inside the shielded scintillator. Since the dimensions of the shielded scintillator are usually large (sometimes more than 50 cm), several photomultipliers are generally used to collect light and the amplitudes of their impulses are added. The anticoincidence scheme is governed by a multichannel amplitude analyzer. Impulses from the NaI (Tl) crystal are analyzed only when

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ACCESSION NR: AT5023152

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there is no impulse from the external scintillator. This construction makes it possible to eliminate from the spectrum of the NaI (TI) crystal impulses due to gamma quanta, which are scattered from the crystal because of the Compton effect and which interact with the shielded scintillator. In the experiments described a liquid shielded scintillator was used- to toluene (with terphenyl) 5 grams/liter plus POPOP (0.1 gram/liter). The scintillation solution (about 130 liters) was located in a steel container 58 cm in diameter and 52 cm high and the well had a diameter of 17 cm and a height of 32 cm. To explore the suppression of the distribution components, lines were obtained for gamma rays of Cs<sup>137</sup> (0.661 Mev) and Zn (1.12 Mev). Each measurement was repeated twice, once under anticoincidence conditions and once under the operating conditions of an ordinary single crystal gamma spectrometer. In the case of the Cs<sup>137</sup> spectrum with the anticoincidence method, Compton distribution decreased by 2.3 times, while for Zn<sup>65</sup> it decreased by 2.7 times. Measurements were made of the background with energies from 0 to 1.2 Mev with a single crystal spectrometer and under anticoincidence conditions- the breadth of the analyzer channel was 12 kev. In this spectral region, the background decreased 1.8 times under anticoincidence conditions. Orig. art. has: 4 figures

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L 1166-66

ACCESSION NR: AT5923152

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: NP

NR REF SOV: 000

OTHER: 009

Card 3/3

JP



18. IIII

27270

S/128/61/000/005/001/005  
A054/A127

AUTHORS: Baranov, S.M., Golub, G.M. and Ivanova, Z.M.

TITLE: Effect of the melting conditions on the notch toughness of magnesium modified iron

PERIODICAL: Liteynoye proizvodstvo, no. 5, 1961, 4 - 6

TEXT: Because of low notch toughness it is not possible to use high-strength magnesium iron for structures subjected to high impact loads. The low notch toughness is caused by the magnesium which is a surface active substance changing the shape of the crystals and which is, moreover, not easily soluble in the medium in which it is active. Magnesium promotes the formation of non-disintegrating cementite and spheroidal graphite. Furthermore, it concentrates at the crystal border and lowers the toughness of the iron. In order to establish to what extent the melting process affects the properties and behavior of magnesium, three test series were carried out in which the effect of the crucible lining, chemical composition, amount of magnesium, thermal conditions of magnesium modification on the metal qualities were investigated. The test meltings took place in acid and basic crucibles. A 30-kg induction furnace was used in the first test series,

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Effect of the melting conditions ...

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S/128/61/000/005/001/005  
A054/A12\*

the charge consisted of 67.3kg (S+3kg) steel and graphite electrode scraps. 10-25% magnesium was added in the form of silicon-magnesium master alloy. For slag formation, crushed glass was used in the acid melting process and calcined lime + fluorite (in a 4:1 ratio) in the basic melting process. The master alloy was first decarburized by 0.05 - 0.1% aluminum. 20-25% C<sub>W</sub> 75 (Si75) ferrosilicium was added to the master alloy. In the first test series the silicon content varied between 1-3%, while the amount of magnesium was 0.057 - 0.34%. Modification was effected at a melt temperature of 1,400 - 1,550°C. The notch toughness of the metal, poured into wedge-shaped specimens and annealed at 900-950°C for 1-2 hours and at 700-730°C for 4-5 hours, was determined by the Mesnager process (with grooves in the samples). The optimum values were obtained for iron containing 3.0-3.2% C; 1.7-2.2% Si; 0.25-0.5% Mn, less than 0.04 S; 0.1% P, 0.2% Cr and 0.05% Mg. Any excess magnesium causes brittle fracture. The optimum modification temperature was 1,400 - 1,450°C. Iron poured in basic crucible showed better properties ( $a_k = 2.35 \text{ kgm/sq cm}$ ; HB = 143 kg/sq mm) than that poured in acidic crucible ( $a_k = 1.51 \text{ kgm/sq cm}$ , HB = 149 kg/sq mm). The second test series was carried out in acid and basic crucibles of 150-kg industrial induction furnaces. The 120-kg charge consisted of killed steel (0.3% C; 0.56% Si; 0.40% Mn; 0.035% P; 0.042% S; 0.05% Cr), and electrode scraps while for slag forming the same

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agents were used as in the first tests. The iron was modified by a 50% magnesium nickel master alloy, at 1,440-1,460°C. The clover-shaped specimens were heat-treated at 950°C and 700-740°C. The best results were obtained with a magnesium content of 0.3 - 0.4%. Also in this case better results were obtained as to ductility and notch toughness in iron poured into basic crucible, as the result of a more thorough removal of slag-containing silicium oxide compounds. In acid crucibles deoxidation took place before adding ferrosilicium which did not affect the ductility but lowered the notch toughness. When using basic crucibles, previous deoxidation had not marked influence on these properties. In order to obtain spheroidal graphite in the structure, some excess magnesium had to be added. To deoxidize the residual amount of magnesium 1% soda, 2% soda + 0.15% ore and 0.3% ore were added. When melting without oxidation, the treatment of iron with soda, as a rule, increased the notch toughness by 1.5 - 2 times, whereas when oxidizing with a soda-ore mixture and then with ore alone, the notch toughness decreased. The third tests series was carried out in an acid cupola furnace (3t/h) with pig iron (no. 3 and 4). The iron was heated in the forehearth to 1,440-1,460°C and processed with oxygen. Calcined soda (1% of the iron quantity) was added in the ladle and mixed thoroughly with the metal, thus sacrificing the silicium and sulfur containing compounds. Then, without removing the slag, 3% sil-

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A054/A127

Effect of the melting conditions ...

cium-magnesium master alloy with a 10-12% magnesium content was added in the shape of a disk fixed to a rod. After slag-removal, the iron was again treated with soda. The analysis of the wedge and clover-shaped specimens produced the following data: 2.8-3.5% C; 2.0-3.7% Si; 0.28-0.6% Mn; 0.06-0.14% P; 0.02-0.005% S; 0.05-0.2% Cr; 0.056-0.074% Mg. The samples were annealed at 900°C and 730°C. The iron obtained had a higher notch toughness than the conventional, but compared with iron produced in the basic test furnaces its notch toughness was lower. This is partly caused by the higher P, S and Mn content of the initial metal and partly by the higher content of surface-active silicon oxides, hydrogen and magnesium in the metal base. The tests were carried out with the cooperation of S.Ya. Kolodnyy, Candidate of Technical Sciences. There are 3 figures, 3 tables and 4 Soviet-bloc references.

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... .. in ... ..

IVANOVA, L. M.; KONSTANTINOV, I. Ye.; CYEDOROV, G. A.

"Scintillation Spectrometer for Fast Neutrons."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22  
Feb 64.

MIFI (Moscow Engineering Physics Inst)

ONISEV, N. S.; IVANOVA, Z. M.; KONSTANTINOV, I. Ye.

"The Gamma Spectrometer with Anti-Coincidence Scintillation Shielding."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi, 14-22  
Feb 64.

MIFI (Moscow Engineering Physics Inst)

IVANOVA, Z. M.

USSR 4

V Thiocarbocyanines with aryloxy groups in 8,10-positions.  
 A. I. Kiprianov, Zh. M. Ivanova, and S. G. Fridman.  
*Ukrain. Khim. Zhur.* 29: 647-56 (1954) (in Russian). -- The  
 following 2-aryloxymethylbenzothiazoles (I) (aryl = (a) H, (b)  $p$ - $C_6H_4$ , (c)  $p$ - $MeOC_6H_4$ , (d)  $o$ - $MeOC_6H_4$ , (e) 1- $C_6H_4$ , and (f) 2- $C_6H_4$ ) are prepd. by condensing  $o$ - $H_2NC_6H_4SH$  with  $ArOCH_2CO_2H$  (aryl group, % yield, and m.p. given): a, 81, 80°; b, 71, 118°; c, 71, 123°; d, 79, 80°; e, 70, 111-12°; f, 88, 119°. Quaternary salts (II) of the following I are prepd. by heating I and  $p$ - $MeC_6H_4SO_3Et$  (1:1.1 molar ratio) 3 hrs. at 135-40°, washing the mass with  $Me_2O$ , and crystg. from  $H_2O$  (aryl group, % yield, and m.p. given): a, 27, 157-8°; b, 61, 155°; c, 55, 165-7°; d, 47, 165°; e, 59, 160-2°; f, 61, 181-2°. 8,10-Diaryloxythiocarbocyanine dyes (III) are obtained by heating 5 ml. dry  $CaH_2$ , 1 g. of the following II, and 0.6 g.  $o$ -formate 1 hr. at 115-30°, dilg. with  $KOH$ , and adding hot aq.  $KCl$  or  $NaClO_4$  to the boiling mixt. (aryl group, anion, % yield, m.p., and max. absorption spectra in  $m\mu$  given): a,  $I^-$ , 89, 224-4°, 583; b,  $ClO_4^-$ , 20, 239-1°, 583; c,  $I^-$ , 15.5, 100-7°, 501; d,  $I^-$ , 14, 161, 300; e,  $ClO_4^-$ , 30, 235-3°, 548; f,  $I^-$ , 11, 166-8°, 582. Styryl dyes (IV) are prepd. by heating equimolar amts. of the following II and  $p$ - $Me_2NC_6H_4CH_3$  20 min. at 135° in  $Ac_2O$ , adding hot aq.  $KCl$  or  $NaClO_4$ , and crystg. from  $KOH$  (aryl group, anion, % yield, m.p., and absorption spectra in  $m\mu$  given): a,  $I^-$ , 38, 240-1°, 420; b,  $ClO_4^-$ , 07, 223-5°, 520; c,  $ClO_4^-$ , 85, 196-7°, 520; d,  $ClO_4^-$ , 01, 212-15°, 620; e,  $I^-$ , 05, 163-4°, 622; f,  $ClO_4^-$ , 31, 182-5°, 522. Introduction of 2-arylyl radicals in the 8 or 10-positions shifts the absorption spectra (V) of the dyes, decreasing it by 8-10  $m\mu$  and IV and increasing it by 27-43  $m\mu$  for III; the V of the analogous unsubstituted dyes 330-340  $m\mu$ . Cf. Brooker and White, *C.A.* 44, 7084. Elizabeth Breda

IVANOV, S. I.

*N,N'*-Diphenylamidines of *alpha*-hydroxy acids. H. CH  
 V. I. Ivanov, E. S. Lomachenko, and G. M. Lyubskaya,  
 Ukrain. Khim. Zhur. 21, 202-203 (1955) (Ukrainian);  
 C.A. 49, 11810a.—The *N,N'*-diphenylamidination re-  
 action in the presence of  $\text{PCl}_5$  was extended to the ali-  
 phatic  $\alpha$ -hydroxy- and  $\alpha$ -amino acid series and to aromatic  
 thio- and hydronymino acids. Glycolic acid (1.52 g.)  
 heated at  $50^\circ$  with 0.79 g.  $\text{SnCl}_4$  in 10 ml.  $\text{PhCl}$  until  $\text{HCl}$   
 evolution has ceased, then with 18.6 g.  $\text{PhNH}_2$  for 4 hrs. at  
 $185-30^\circ$ , the reaction mixt. neutralized with  $\text{Na}_2\text{CO}_3$ , the  
 excess of  $\text{PhCl}$  and  $\text{PhNH}_2$  steam distd. off, the residue fil-  
 tered, and the filtrate treated with  $\text{N HCl}$  gave, after neu-  
 tralization with  $\text{Na}_2\text{CO}_3$ , 63.4% *N,N'*-diphenylglycolamidine,  
 m.  $130-9^\circ$  (from  $\text{EtOH}$ ). Similarly were obtained the  
*N,N'*-diphenylamidines of mandelic acid (65%), m.  $102-3^\circ$   
 (from  $\text{EtOH}$ ), yellowing on heating, and of lactic acid  
 (72.1%), m.  $170-1^\circ$  (from  $\text{EtOH}$ ). Under similar condi-  
 tions  $\text{Ph}_2\text{C}(\text{OH})\text{CO}_2\text{H}$  gave 83.4% of its acidide, and thio-  
 glycolic acid gave 78.4% *N,N'*-diphenylamidine of  $\text{AcOH}$ .  
 Other *N,N'*-diphenylamidines prepd. were those of: phenyl-  
 glycine (63%), m.  $179-81^\circ$  (from  $\text{EtOH}$ ), glycine (40.4%),  
 m.  $187-8^\circ$  (decompn.) (from  $\text{EtOH}$ ), *p*-aminosalicylic acid  
 (68%), m.  $177-8^\circ$  (from  $\text{EtOH}$ ), and thioacetic acid  
 (I) (30.7%), yellow crystals, m.  $137-40^\circ$  (twice from  $\text{EtOH}$ ),  
 turns orange at  $135^\circ$ . Methylating I (0.4 g.) in 10 ml. 0.2*N*  
 $\text{NaOH}$  with 0.2 ml.  $\text{Me}_2\text{SO}$  gave 81% *o*- $\text{MeSC}_6\text{H}_4\text{C}(\text{NPh})_2$   
 $\text{NHPh}$ , m.  $110-11^\circ$ , which is insol. in bases, while oxidizing  
 I with  $\text{H}_2\text{O}_2$  gave 75.2% *o*- $\text{P}(\text{NH}(\text{Ph}))_2\text{C}_6\text{H}_3\text{S}$ , m.  $174-$   
 $6^\circ$  (from  $\text{EtOH}$ ). Gary Geraghty

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YAGUPOL'SKIY, L.M.; IVANOVA, Zh.M.

Fluorine derivatives of acenaphthene. Part 1. Zhur. ob. khim.:27  
no.8:2273-2276 Ag '57. (MLBA 10\*9)

1. Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR.  
(Acenaphthene)

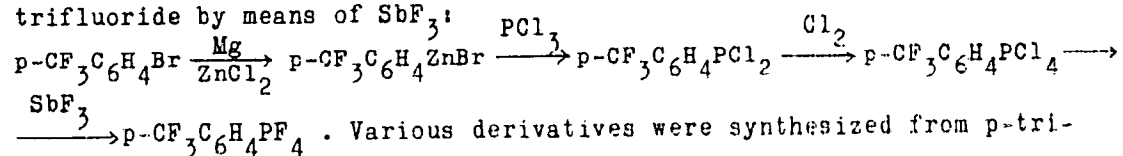


87531

p-Trifluoro Methyl Phenyl Tetrafluoro  
Phosphorus and Its Derivatives

S/079/60/030/012/015/027  
B001/E064

p-trichloro methyl-phenyl phosphorus tetrachloride, as well as the di-chloride of p-trichloro methyl-phenyl phosphinic acid with  $\text{SbF}_3$  or  $\text{ZnF}_2$  proved unsuccessful. Therefore, the authors proceeded from a compound already containing a trifluoro methyl group when synthesizing p-trifluoro methyl-phenyl phosphorus tetrachloride. The authors proceeded from p-bromobenzotrifluoride, which was converted into organo-magnesium and, moreover, into organo-zinc compounds, and by means of  $\text{PCl}_3$  into p-tri-fluoro methyl-phenyl phosphine dichloride. The latter was chlorinated and furthermore fluorinated to p-trifluoro methyl-phenyl tetraphosphorus trifluoride by means of  $\text{SbF}_3$ :



. Various derivatives were synthesized from p-tri-fluoro methyl-phenyl phosphorus tetrachloride. In one of previous papers (Ref.3) it was shown that phenyl phosphorus tetrachloride reacts with diazomethane by the scheme  $\text{C}_6\text{H}_5\text{PCl}_4 + 2\text{CH}_2\text{N}_2 \longrightarrow \text{C}_6\text{H}_5\text{PCl}_2(\text{CH}_2\text{Cl})_2$ .

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p-Trifluoro Methyl Phenyl Tetrafluoro  
Phosphorus and Its Derivatives

S/079/60/030/012/015/027  
B001/B064

Phenyl phosphorus tetrachloride reacts with diazomethane less vigorously. After the reaction products had been hydrolyzed, a crystalline acid

product was separated which was identified as  $C_6H_5P(=O)(OH)CH_2F$ , i.e., phenyl-  
fluoro methyl phosphinic acid.

In contrast to published data it was shown that phenyl phosphorus tetra-fluoride reacts immediately with carboxylic acids, under the formation of acid fluorides. Thus, phenyl phosphorus tetrafluoride gives propionic acid fluoride with propionic acid. In order to protect the glass against HF, however, a salt of this acid (e.g., the lithium salt) was used. There are 7 references: 4 Soviet, 1 US, and 2 Swiss.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR  
(Institute of Organic Chemistry of the Academy of Sciences  
Ukrainskaya SSR)

SUBMITTED: January 23, 1960

Card 3/3

IVANOVA, Zh.M.; KIRSANOV, A.V.

Phosphorus aryltrifluoromonohydrides. Zhur.ob.khim. 31  
no.12:3991-3994 D '61. (MIRA 15:2)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.  
(Phosphorus organic compounds)

MYSHKIN, Ye.A.; LAVROVA, N.N.; IVANOVA, Z.M.

Complete analysis of petroleum sulfonic acids and Petrov's  
contacts. Zav.lab. 27 no.2:163-164 '61. (MIRA 14:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke  
nefti i gaza.  
(Sulfonic acids) (Sulfuric acids)

IVANOVA, Zh.M.; KIRSANOV, A.V.

Phosphorus aryltrifluoromonochlorides and N,N-disubstituted  
phosphorus aryltrifluoroamides. Zhur.ob.khim. 32 no.8:2592-2595  
Ag '62. (MIRA 15:9)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.  
(Phosphorus organic compounds)

IVANOVA, Zh.M.

Mono-and difluorophosphites. Zhur. ob. khim. 34 no. 3:858-861  
Mr '64. (MIRA 17:6)

1. Institut organicheskoy khimii AN UkrSSR.



IVANOVA, Zh.M.; DERKACH, G.I.; KIRSAKOVA, N.A.

Derivatives of N-acylisothiocyanates. Zhur. ob. khim. 34 no.10;  
3516-3518 O 1964. (MIRA 17:11)

1. Institut organicheskoy khimii AN UkrSSR.

IVANOVA, Zh.N.

Amidodifamorphosulfites. Zher. ob. khim. 35 no.2:164-166 In 165.  
(1974 17:2)

1. Institut organicheskoy khimii AN UkrSSR.

IVANOVA, Zh.M.; LEVCHENKO, Ye.S.; KIRSANOV, A.V.

Alkoxy and aroxydihalophosphazo sulfonyl aryls. Zhur. ob. khim.  
no. 3:1607-1612 S '65. (MIRA 18:10)

1. Institut organicheskoy khimii AN UkrSSR.

IVANOVA, Zh. M.; KIRSANOVA, N.A.; DERKACH, G.I.

Derivatives of N-acyliminocarbonic acid chlorides. *Zh. Org. Khim.* 1 no. 12:2186-2191 D '65 (MIRA 19:1)

1. Institut organicheskoy khimii AN UkrSSR. Submitted December 25, 1964.

L 21797-66 EWP(j)/EWT(m) RM

ACC NR: AP6012647

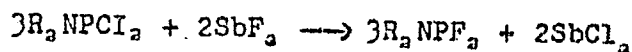
SOURCE CODE: UR/0079/65/035/001/0164/0166

AUTHOR: Ivanova, Zh. M.ORG: Institute of Organic Chemistry, AN UkrSSR (Institut organicheskoy khimii) <sup>24</sup> <sub>E</sub>TITLE: Amidodifluorophosphites

SOURCE: Zhurnal obshchey khimii, v. 35, no. 1, 1965, 164-166

TOPIC TAGS: fluorinated organic compound, fluorination, antimony compound, organic phosphorous compound

ABSTRACT: Dialkylamidodifluorophosphites are readily obtained by reacting dialkylamidodichlorophosphites with antimony trifluoride at 60-80°;



Under more severe conditions, the yield of dialkylamidodifluorophosphite is sharply reduced. No reduction of antimony trihalogenide to the metallic state occurs, as is the case in the fluoridation of arylchlorophosphines. High boiling dialkylamidodifluorophosphites and arylalkylaminodifluorophosphites are more conveniently synthesized in an analogous reaction, but using zinc fluoride. In the fluoridation of dialkylamidodichlorophosphites using arsenic trifluoride, a complex mixture is formed from

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UDC: 546.183.2+547.412.722

L 21797-66

ACC NR: AP6012647

which individual compounds cannot be isolated. Dialkylamido- and arylalkylamidodifluorophosphites are colorless volatile liquids with a disagreeable odor. In air, they fume very weakly, are barely corrosive to glass, do not react at room temperature with alcohols, are hydrolyzed slowly with cold water, and readily dissolve in organic solvents. At low temperature (0-2°C) in a neutral solvent, dialkylamidodifluorodichlorophosphors are not disproportionated, since when treated with sulfur dioxide, difluorides of phosphoric acid dialkylamides are obtained at high yields. Orig. art. has: 1 table. [JPRS]

SUB CODE: 07 / SUBM DATE: 30Nov63 / ORIG REF: 001 / OTH REF: 007

Card 2/2

RB

L 25593-66 EWT(m)/EWP(j) RM

ACC NR: AP6016696

SOURCE CODE: UR/0079/65/035/009/1607/1612

AUTHOR: Ivanova, Zh. M.; Levchenko, Ye. S.; Kirsanov, A. V.

33

5

ORG: Institute of Organic Chemistry, AN UkrSSR (Institut organicheskoy khimii AN UkrSSR)TITLE: Alkoxy- and aroxydihalophosphazosulfonylaryls

SOURCE: Zhurnal obshchey khimii, v. 35, no. 9, 1965, 1607-1612

TOPIC TAGS: ester, phosphoric acid, organic phosphorus compound, chlorinated organic compound, fluorinated organic compound, organic sulfur compound

ABSTRACT: Dichloro- and difluoroalkyl phosphites and dichloro- and difluoro-phenyl phosphites react with dichloroamides of arenesulfonic acids to form the corresponding alkoxy- and phenoxyhalophosphazosulfonylaryls, which are hydrolyzed according to various schemes, depending on their nature and the reaction conditions. The potassium salts of difluorides of arylsulfonylamido-phosphoric acids react with one mole of sodium methylate to give potassium salts of monofluorides of the monomethyl esters of arylsulfonylamidophosphoric acids, the structure of which is demonstrated by conversion to dimethyl esters of arylsulfonylamidophosphoric acids in the reaction with sodium methylate. Orig. art. has: 2 tables. [JPRS]

SUB CODE: 07 / SUBM DATE: 09Oct64 / ORIG REF: 008

Card 1/1 f/

UDC: 546.185+547.556.9.444

L 34127-66 EWT(1)/EWT(m)/EWF(j) RO/RM

ACC NR: AP6025540

SOURCE CODE: UR/0079/65/036/001/0162/0163

AUTHOR: Ivanova, Zh. M.; Liptuga, N. I.; Stukalo, Ye. A.; Derkach, G. I. 32ORG: Institute of Organic chemistry, AN UkrSSR (Institut organicheskoy khimii AN UkrSSR) BTITLE: Isothiocyantes of alkyl esters of methylphosphonic acid and their derivatives

SOURCE: Zhurnal obshchey khimii, v. 36, no. 1, 1966, 162-163

TOPIC TAGS: ester, phosphate, phosphorylation, chlorination reaction rate, chemical synthesis

ABSTRACT: Chlorides of alkyl esters of methylphosphonic acid, like dialkyl chlorophosphates, react with potassium thiocyanate to form isothiocyantes of alkyl esters of methylphosphonic acids. These isothiocyantes may be chlorinated to yield dichlorides of monoalkylmonomethylphosphonyliminocarbonic acid. Both series of reaction products react vigorously with alcohols, phenols, ammonia and amines to form the corresponding phosphorylated derivatives of thioureas and iminocarboxylic acid. Four isothiocyantes and two dichlorides were synthesized and characterized. Orig. art. has: 1 table. [JPRS: 35,998]

SUB CODE: 07 / SUBM DATE: 12Jul65 / ORIG REF: 002

Card 1/1-20



ISOFIDI, I.Ye.; IVANOVA, Zh.P.; ZHEBRAK, V.D.; BERSHTEYN, N.V.

Operation of an electric desalter on a nonionogenic oxyethylene fatty acid demulsifier. Neftoper. i neftekhim. no.5:3-5 '64.  
(MIRA 17:8)

1. Salavatskiy kombinat i Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefi i gazov i polucheniyu iskusstvennogo zhidkogo topliva.

SIROTKINA, A.I., kand.geograf.nauk; IVANOVA, Z.N., mladshiy nauchnyy sotrudnik; BORISOV, N.D., Prinimali uchastiye: OTDELENOVA, N.N., tekhnik; SKITEYKIN, A.I., tekhnik. PERLOVSKAYA, A.D., red.; IVANOV, G.S., kand.tekhn.nauk, otv.red.; ZARKH, I.M., tekhn.red.

[Directions for meteorological and hydrological stations and posts] Nastavlenie gidrometeorologicheskim stantsiam i postam. Moskva, Gidrometeor.izd-vo. No.10. [Inspection of meteorological and hydrological stations and posts] Inspektsiia gidrometeorologicheskikh stantsii i postov. Pt.5. [Inspection of meteorological and hydrological ship stations] Inspektsiia sudovykh gidrometeorologicheskikh stantsii. 1959. 45 p. (MIRA 13:8)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye gidrometeorologicheskoy sluzhby. 2. Nauchno-issledovatel'skiy institut aeroklimatologii (for Sirokina). 3. Gosudarstvennyy okeanograficheskii institut (for Ivanova). 4. Leningradskoye otdeleniye Gosudarstvennogo okeanograficheskogo instituta (for Borisov). 5. Nachal'nik Metodicheskogo otdela Gosudarstvennogo okeanograficheskogo instituta (for Ivanov).

(Meteorology, Maritime)

(Oceanography)

LANDE, P.A. [deceased]; VARVARINA, A.I.; IVANOVA, Z.N.

Using the sound method in the quality control of stoppers  
for steel pouring ladles. Ogneupory 28 no.10:466-468 '63.  
(MIRA 16:11)

1. Chelyabinskiy metallurgicheskiy zavod.

IVANOVA, Z. N.

"Colloidal Reactions During the Clinical Course of Internal Diseases." Cand Med Sci, Central Inst for the Advanced Training of Physicians, Min Health USSR, Moscow, 1955. (KL, No 12, Mar 55)

SO: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

IVANOVA, Z. N.

"Concerning Pathogenesis of Myeloma Disease," by Z. N. Ivanova,  
Klinich. Meditsina, Vol 33, No 7, 1955, pp 57-64 (from Refera-  
tivnyy Zhurnal -- Khimiya, Biologicheskaya Khimiya, No 13, 10  
Jul 56, p 91, Abstract No 12920)

Studies were conducted on the biochemical composition of blood plasma proteins during various forms of myeloma using the turbidimetric methods and electrophoresis. The constant unique symptom of myeloma disease was the increased percentage of dry blood residue (1.5 - 2.5 times). A number of patients showed characteristic changes in protein formula: acute hyperproteinemia (total blood plasma protein amounting to 17.7 Gm %) pronounced globulin shift with hyperglobulinemia with a sharp increase of the relative and absolute quantity of gamma-globulins (up to 79.3% and 13.76 Gm % respectively).

Sum 1219

IVANOVA, Z.N.

Effect of certain analeptics on the latent reflex period in  
chemical, thermal and electrical stimulation. Farm.i toks. 10  
no.6:3-7 N-D '47. (MIRA 7:2)

1. Iz kafedry farmakologii (zaveduyushchiy - professor V.V.Zakusov)  
I Leningradskogo meditsinskogo instituta im. akademika Pavlova.  
(Pharmacology) (Reflexes)

IVANOVA, S. N.

Chemical Abstracts  
Vol. 48  
Apr. 10, 1954  
Biological Chemistry

Effects of some drugs on reflexes of the costal pleura near the pulmonary root. Z. N. Ivanova, I. P. Pavlov Inst. Med. Inst., Leningrad. *Farmakol. i Toksikol.* 19: 54-5, 51-8 (1953). ~~Various~~ hexenal, thipental, medonal, urethan, HCl, H<sub>2</sub>O, and procaine, antibiotics (penicillin and ocmofin), glucose, and some choline inhibitors (dibacil, pachycarpus, pentapben, and typhen) were tested for effects on pressor reflexes of the costal pleura and depressor reflexes at the pulmonary root in cats. Narcotics nearly or quite eliminate the pressor reflexes, but only mildly inhibit the depressor reflexes, excepting that procaine in subtoxic doses (20-30 mg./kg.) suppressed both. Procaine penicillin acted like procaine. Glucose (intravenous, 1.3-2 g./kg. in 40% soln.) inhibited both reflexes, but its activity was variable. Typhen was inert to both reflexes, and the other choline inhibitors were nearly inert. J. R. S.

RK  
9-15-54

IVANOVA, Z. N.

"The Effect of Certain Pharmacological Agents on Bronchospasm Upon Stimulation of the Vagus Nerve," a report presented at the 570th meeting of the Pharmacology and Toxicology Section, Leningrad Society of Physiologists, Biochemists and Pharmacologists imeni I. M. Sechenov, 9 June 1954, Farm. i Toks., July-Aug. 1955, pp. 60-63.

Sum. 900, 26 Apr 56

Chair of Pharmacology, 1st Leningrad Medical Inst.



ZAKUSOV, V.V., professor; IVANOVA, Z.H.; KHARKOVICH, D.A. (Leningrad)

Ganglionic effect of certain hypnotics. Klin. med. 33 no.9:3-5 S  
'55. (MLRA 9:2)

1. Iz kafedry farmakologii (sav.-deystvitel'nyy chlen AMN SSSR prof.  
V.V. Zakusov)i Leningradskogo meditsinskogo instituta imeni I.P.  
Pavlova.

(HYPNOTICS AND SEDATIVES, effects  
ganglion-blocking)

IVANOVA, Z.N.

Effect of certain pharmacological substances in various combinations on reflexes from the parietal pleura and the region of the root of the lung. Farm. i toks. 19 no.2:20-24 Mr-Apr '56. (MLRA 9:7)

1. Kafedra farmakologii (zav. - deystvitel'nyy chlen AMN SSSR prof. V.V.Zakusov) I Leningradskogo meditsinskogo instituta imeni akad. I.P.Pavlova.

(PLEURA, effect of drugs on, various combinations, blood pressure responses (Rus))

(BLOOD PRESSURE, physiology eff. of pleural chemostimulation with various combinations of drugs (Rus))

IVANOVA, Z.N.; KOVALEV, G.V.; SPALVA, Ye.A.; KHAUNINA, R.A.; SHAPOVALOV, A.I.

Effect of a lytic cocktail on various phenomena of nervous activity;  
experimental study. Vest.khir. 83 no.10:101-108 0 '59.

(MIRA 13:2)

1. Iz kafedry farmakologii (ispolnyayushchiy obyazannosti zavedu-  
yushchego - dotsent M.I. Pal'chevskaya) 1-go Leningradskogo meditsin-  
skogo instituta im. I.P. Pavlova. Adres avtorov: Leningrad, ul. L.  
Tolstogo, d.6/8, 1-y Meditsinskiy institut, kafedra farmakologii.  
(HIBERNATION, ARTIFICIAL pharmacol.)  
(CENTRAL NERVOUS SYSTEM pharmacol.)

IVANOVA, Z.N.

Influence of narcotics, analgesics and see aminazine on reflex reactions appearing in the blood vessels of the lesser circulation. Biul. eksp. i biol. med. 50 no. 8:100-105 Ag '60. (MIRA 13:10)

1. Iz kafedry farmakologii (ispolnyayushchiy obyazannosti zaveduyushchego prof. A.V. Val'dman, nauchnyy konsul'tant - deystv. chlen AMN SSSR V.V. Zakusov) i Leningradskogo meditsinskogo instituta imeni I.P. Pavlova. Predstavlena deystv. chlenom AMN SSSR V.V. Zakusovym.  
(CHLORPROMAZINE) (LUNGS--BLOOD SUPPLY) (NARCOTICS)  
(ANALGESICS)

VAL'DMAN, A.V., prof. farm. Prinsipala uchastiye IVANOVA, Z.N.; LEBEDEV,  
V.P., otv. red.

[Studies on the pharmacology of the reticular formation and of  
synaptic transmission] Issledovaniia po farmakologii retiku-  
liarnoi formatsii i sinapticheskoi peredachi. S predisl. V.V.  
Zakusova. Pod red. A.V.Val'dmana. Leningrad, 1961. 431 p.  
(MIRA 15:1)

1. Leningrad. Pervyi leningradskiy meditsinskiy institut.
2. Leningradskiy meditsinskiy institut im. akademika I.P. Pavlova  
(for Val'dman).  
(BRAIN) (NERVOUS SYSTEM) (PHARMACOLOGY)

VAL'DMAN, A.V.; IVANOVA, Z.H.; KOVALEV, G.V.; LEBEDEV, V.F.; SHAFVALOV, A.I.

Effect of aminazine on the ascending and descending functions of the  
reticular formation. Fiziol. zhur. 47 no.7:852-862 J1 '61.  
(MIRA 15:1)

1. From the Department of Pharmacology, I.P.Pavlov Medical Institute,  
Leningrad.

(CHLORPROMAZINE) (BRAIN\_\_INNERVATION)

IVANOVA, Z. N.

Dissertation defended at the Institute of Physiology imeni I. P. Pavlov  
for the academic degree of Doctor of Medical Sciences: 1962

"Effect of Neurotropic Agents on Reflexes of the Respiratory Organs."

Vestnik Akad Nauk, No. 4, 1963, pp. 119-145

IVANOVA, Z.H.

Effect of neurotropic substances on chemoreflexes from the vessels of the pulmonary circulation. Uch.zap.Inst.farm. i khimioter. AMN SSSR 3:265 .. 277'63. (MIRA 16:9)

1. Chair of Pharmacology (Head - Prof. A.V.Waldman) of the First Leningrad I.P.Pavlov medical Institute.  
(NEUROPSYCHOPHARMACOLOGY) (PULMONARY CIRCULATION)



IVANOVA, Z.N.

Effect of narcotics and analgesics on the pulmonary component  
of Bezold's reaction. Vest. AMN S SSR 18 no.1:52-58 '63. (MIRA 16:2)

1. Kafedra farmakologii I Leningradskogo meditsinskogo instituta  
imeni I.P. Pavlova.  
(RESPIRATION) (NEUROCHEMISTRY)

OZHIGANOV, V.S.; PROKOP'YEVA, A.M.; IVANOVA, Z.P.

Manufacture and service of grog-carbon steel-pouring stoppers.  
Ogneupory 27 no.2:63-66 '62. (MIRA 15:3)

1. Verkh-Isetskiy metallurgicheskiy zavod.  
(Open-hearth furnaces--Equipment and supplies)

VOLODINA, A.S.; IVANOVA, Z.P.; CHUDAKOVA, A.P.; KUKANOVA, V.I.;  
POPOV, N.V., red.; MILIKESOVA, I.F., tekhn. red.

[Album of wood-cutting instruments] Al'bom derevorezhushchego  
instrumenta. Moskva, TSentr. in-t tekhn. informatsii i ekon.  
issl. po lesnoi, bumazhnoi i derevoobrabatyvaiushchei promyshl.,  
1962. 353 p. (MIRA 17:3)

1. Moscow. Nauchno-issledovatel'skiy institut derevoobrabaty-  
vayushchego mashinostroyeniya.

VESELOVSKAYA, M.M.; IVANOVA, Z.P.; KLEVTSOVA, A.A.

Buried diabases in the Volga-Ural region. Izv.AN SSSR, Ser.geol. 25  
no.8:37-57 AG '50. (MIRA 13:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy  
neftyanoy institut, Moskva.  
(Volga-Ural region--Diabase)

IVANOVA, Z.P.

Petrographic study of the Tatarian stage in the Gor'kiy region of  
the Volga Valley. Trudy VNIGNI no.2:201-208 '51. (MLRA 10:4)  
(Volga Valley--Geology, Stratigraphic)

IVANOVA, E. P.

SUVOROV, S. I.;  
BECHTAYKO, S. K.; IVANOVA, E. P.;  
IVANOVA, Z. P.; KURBATOV, M. S.

Central provinces of the Russian Platform. Trudy VNIIGI no. 161:171-248  
'57. (VNIIGI 10:9)

(Russian Platform--Geology)

IVANOVA, Z.P.

Pre-Devonian sediments. Trudy VNIGNI no. 10:23-29 '58.  
(MIRA 14:5)  
(Russian Platform -Geology, Stratigraphic)

IVANOVA, Z.P.; KLEVTSOVA, A.A.; VESELOVSKAYA, M.M.

Stratigraphy of Bavly sediments in the Volga-Ural region.  
Trudy VNIIGHI no. 19:7-23 '59. (MIRA 13:12)  
(Volga-Ural region--Geology, Stratigraphic)



IVANOVA, Z.P.; KLEVTSOVA, A.A.

Pre-Devonian stratigraphy and facies in the Volga-Ural region.  
Trudy VNIGNI no.22:94-100 '59. (MIRA 13:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologo-razvedochnyy neftyanoy  
institut.

(Volga-Ural region--Geology, Stratigraphic)

3 (5)

AUTHORS: Ivanova, Z. P., Veselovskaya, M. M., SOV/20-128-4-45/65  
Klevtsova, A. A.

TITLE: On the Stratigraphic Subdivision and the Formation Stages of  
Pre-Devonian Deposits in the Central and Eastern Regions of  
the Russian Platform

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 4, pp 800 - 803  
(USSR)

ABSTRACT: The above deposits became interesting since petroleum was found  
in them. They contain Upper Proterozoic and Lower Cambrian  
formations in the sedimentary cover of the part of the plat-  
form mentioned above. More recent sediments: Upper Cambrian  
and Ordovician occur in the central regions of the platform  
and strike in a northwesterly direction. Only the two older  
ones (more than 3000 m thick) are discussed in the present  
paper. Quartzite sandstones (analogues of the Shokshinskiye)  
are the oldest of the platform formations investigated here.  
They rest directly upon the basement in Yulovo-Ishim and  
Yelshanka. They were identified by the authors as the Yulovo-  
Ishimskaya suite of "Iotnium". The deposits known as "Nizhne-  
Bavliniskiye" in the east, as Kaverinskaya and Serdobskaya

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On the Stratigraphic Subdivision and the Formation  
Stages of Pre-Devonian Deposits in the Central and  
Eastern Regions of the Russian Platform

SC7/20-128-4-45/65

series in the central part lie stratigraphically higher above a disconformity and an angular unconformity (Refs 5,8). In the Nizhno-Bavliniskiye deposits the Kaltasinskaya- (316 m thick) and Serafimovskaya suites (450 m thick) and their time equivalent, the Serdovskaya series, are divided into lower and upper strata corresponding to the sedimentation half-cycles. In several cross sections the above suites are intruded by gabbro and diabase. Figure 1 shows the occurrence of the suites mentioned. A thick (more than 700 m) sandstone body classified by the authors as the Leonidovskaya suite (Ref 2) rests upon the Serafimovskaya suite. The Riffian formations are progressively overlain by Lower Cambrian sediments with an angular unconformity and a stratigraphic disconformity. This body is most probably synchronous with the Volynskiy (volcanogenic) complex of the western part of the platform (according to Ye. P. Bruns, Ref 1). The Lower Cambrian (Verkhne-Bavliniskiye) deposits in the eastern regions of the platform consist of 2 complete sedimentation cycles. Table 1 gives a stratigraphic section of the pre-Devonian deposits. The authors identified

Card 2/3

On the Stratigraphic Subdivision and the Formation  
Stages of Pre-Devonian Deposits in the Central and  
Eastern Regions of the Russian Platform

SOV/20-128-4-25/65

several time units in the latter according to the stratification peculiarities of the old platform sediments: (1) Yulovo-Ishinskaya suite of "Iotnium". (2) Riffian deposits, and (3) Lower Cambrian with decreasing angles of inclination (up to  $30^{\circ}$ ,  $10-17^{\circ}$ ,  $0-9^{\circ}$ , respectively). The rocks of individual structural stages belong to different zones with respect to the degree of deformation (Refs 4,6). Figure 2 shows the microphotographies of the rocks of the "Iotnium" age, figure 3 those of the Riffian age. There are 2 figures, 1 table, and 8 Soviet references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut (All-Union Scientific Research Institute of Geological Petroleum Prospecting)

PRESENTED: May 27, 1959, by N. M. Strakhov, Academician

SUBMITTED: January 25, 1959  
Card 3/3

GOROSHKOVA, V.A.; IVANOVA, Z.P.; MELIKOVA, I.M.; RYZHOVA, A.A.; SUVOROV,  
P.G.; TUNYAK, A.P.; kurator; SHABAYEVA, Ye.V.

Oparino key well. Trudy VNIQNI no.26:5-64 '60. (MIRA 14:1)  
(Russian Platform--Petroleum geology)

VESELOVSKAYA, M.M.; IVANOVA, Z.P.; KLEVTSOVA, A.A.

Stages in the formation of Pre-Devonian sedimentary strata of the Russian Platform and their age. Dokl. AN SSSR 134 no.6:1410-1413  
0 '60. (MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut. Predstavleno akademikom N.K.Strakhovym.  
(Russian Platform--Geology, Stratigraphic)

SEMIKHATOVA, S.V., prof., glav. red.; FILIPPOVA, M.F., red.;  
MAKAROVA, T.V., red.; IVANOVA, Z.P., red.; CHULKOVA,  
V.V., red.; BEKMAN, Yu.K., ved. red.; POLOSINA, A.S.,  
tekh. red.

[Resolutions of the Conference on the Study of Accurate  
Unification of Stratigraphic Scales of the Upper Proterozoic  
and Paleozoic in the Volga-Ural Oil and Gas Region held in  
Moscow at the All-Union Scientific Research Institute of  
Petroleum Geology and Prospecting, February 12-20, 1960]  
Reshenia soveshchania po utochneniiu unifitsirovannykh  
stratigraficheskikh skhem verkhnego proterozoya i paleozoya  
Volgo-Ural'skoi neftegazonosnoi provintsii, sostoiavshegosia  
v Moskeve pri VNIGNI s 12 po 20 fevralia 1960 g. Moskva,  
Gostoptekhizdat, 1962. 47 p. (MIRA 16:5)

1. Soveshchaniye po utochneniyu unifitsirovannykh stratigra-  
ficheskikh skhem verkhnego proterozoya i paleozoya Volgo-  
Ural'skoy neftegazonosnoy provintsii, Moscow, 1960.  
(Volga-Ural--Geology, Stratigraphic)

IVANOVA, Z.P., red.; ZARETSKAYA, A.I., ved. red.; POLOSINA, A.S.,  
tekhn. red.

[Stratigraphic scale of Paleozoic sediments; transactions] Stra-  
tigraficheskie skhemy paleozoiskikh otlozhenii; trudy. Dodevon.  
Pod red. Z.P.Ivanovoi. Moskva, Gostoptekhizdat, 1962. 132 p.

(MIRA 15:6)

1. Soveshchaniye po utochneniyu unifitsirovaniykh stratigraficheskikh  
skhem paleozoya Volgo-Ural'skoy neftegazonosnoy provintsii, Moscow,  
1960.

(MIRA 15:6)

(Geology, Stratigraphic)



IVANOVA, Z.P.

Reservoir properties of Pre-Ordovician sand formations in the  
central regions of the Russian Platform. Trudy VNIIGI no. 36;  
137-148 1963. (MIRA 17:4)

IVANOVA, Z.P.; VESELOVSKAYA, M.M.; KIRSANOV, V.V.

Distribution of the Volhynian series in the Russian Platform.  
Biul.MOIP.Otd.geol. 40 no.5:137-146 S-0 '65. (MIRA 18:11)

ISOFIPI, G.Ya.; IVANOVA, Zh.P.; BAL'KIN, B.M.

Industrial testing of a hydroxyethylated fatty acid demulsifier  
for desalting Arlan oil. Neftteper. i nefteknim. no.19-11 '65.  
(MIRA 18:6)

1. Salavatskiy kombinat.

L 24672-66 EWT(m)/T WE

ACC NR: AP6015819

SOURCE CODE: UR/0318/65/000/001/0009/0011

AUTHOR: Isofidi, G. Ye.; Ivanova, Zh. P.; Gal'perin, B. M. AR 6  
13ORG: Salavat Combine (Salavatskiy kombinat)TITLE: Industrial testing of OZhK emulsion breaker used for desalting Arlan petroleum //SOURCE: Neftepererabotka i neftekhimiya, no. 1, 1965, 9-11TOPIC TAGS: petroleum, petroleum refining

ABSTRACT: Several modes of desalting arlan petroleum by means of OZhK emulsion breaker and electric dehydrators are described together with the apparatus and the modifications made in the latter. A three-stage electrodesalting process with the OZhK demulsifier was found to be best. The electric dehydrators of all three stages operated uniformly. The drained water was transparent, and its pH was about 8 due to the alkali added to the petroleum to neutralize the acidity of the medium. During the testing, the temperature of the petroleum at the first stage was kept at 90°, at the second stage, 80-85°, and at the third stage, 75-80°. The degree of desalting of the last stage was only 79%. This low value shows the necessity of raising the voltage of the electric field between the electrodes in the dehydrators in the third stage from 16.5 kV to 33 kV. Results of the desalting are tabulated as a function of the various conditions used. The results of the three-stage process are tabulated for the month of February, 1964. Orig. art. has: 2 tables. [JPRS]

SUE CODE: 11 / SUEM DATE: none

Card 1/1 *pla*

UDC: 661.185.1.001.42

Dissertation: "Effect of a Change of the Coefficient of Turbulent Exchange of heat on the Distribution of Temperature Fluctuations in the Sea." Cand Phys-Math Sci, Marine Hydrophysics Inst, Acad Sci USSR, 31 May 54. Vechernyaya Moskva, Moscow, 21 May 54.

SO: SUM 284, 26 Nov 1954

3(7)

I V A N O V A , L . S .

PHASE I BOOK EXPLOITATION

SOV/2131

Akademiya nauk SSSR. Morskoy gidrofizicheskiy institut

Termika morya. Khimiya morya (Thermal Regime of the Sea. Chemistry of the Sea) Moscōw, AN SSSR, 1958. 145 p. (Series: Its: Trudy, tom 13) Errata slip inserted. 1,300 copies printed.

Resp. Ed.: A.G. Kolesnikov, Doctor of Physical and Mathematical Sciences; Ed. of Publishing House: L.K. Nikolayeva; Tech. Ed.: N.F. Yegorova.

PURPOSE: This collection of articles is intended for geophysicists, hydrophysicists, and oceanographers.

COVERAGE: These articles deal with problems in the physics and chemistry of sea water. Individual papers treat the turbulent thermal conductivity and heat exchange in sea water, the pulsations in air temperature, the salinity of the Black Sea, the determination of calcium, magnesium, and copper in sea water, and the determination of sodium in atmospheric precipitates. Figures, tables, and graphs accompany the articles. There are 121 references: 92 Soviet, 18 English, 8 German, 2 French, and 1 Swedish.

Card 1/4

Thermal Regime of the Sea (Cont.)

SOV/2131

TABLE OF CONTENTS:

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Boguslavskiy, S.G. Vertical Turbulent Exchange in the Surface Layer of the Sea	14
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Thermal Regime of the Sea (Cont.)

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PELEVIN, V.M., uchitel'; IVANOVA, Z.S., uchitel'

Organizing a local school society for the protection of nature,  
Biol.v shkole no.5:75-76 S-G '59. (MIRA 13:8)

1. Srednyaya shkola No.70 g.Yaroslavllya.  
(Student activities)  
(Floriculture)

KOLESNIKOV, A.G.; IVANOVA, Z.S.; BOGUSLAVSKIY, S.G.

Effect of stability on the intensity of vertical transport in the Atlantic Ocean. Okeanologiya 1 no.4:592-599 '61. (MIRA 14:11)

1. Morskoy gidrofizicheskiy institut AN SSSR.  
(Atlantic Ocean--Hydrology)



GORJAINOV, P.I.; NIKONOV, N.N.; SALEY, P.I., kand.veterinarnykh nauk;  
IVANOVA, Z.S., mladshiy nauchnyy sotrudnik; GORBACH, Ya.S.;  
KUZ'MAK, V.M.; ZAYETS, U.I., veterinarnyy vrach

Use of antibiotics. Veterinariia 37 no.12:63-66 D '60.  
(MIRA 15:4)

1. Direktor Bryanskoj oblastnoy veterinarno-bakteriologicheskoy laboratorii (for Nikonov).
  2. Voronezhskaya nauchno-issledovatel'skaya veterinarnaya stantsiya (for Saley, Ivanova).
  3. Glavnyy veterinarnyy vrach sovkhoza "Metallist", Luganskoy oblasti (for Gorbach).
  4. L'vovskaya ptitsefabrika (for Kuz'mak).
  5. Khersonskaya oblastnaya veterinarno-bakteriologicheskaya laboratoriya (for Zayets).
- (Antibiotics) (Veterinary medicine)

DRUBLYANETS, E.E.; TKACHENKO, N.I.; IVANOVA, Z.T.

Features of the fermentation of wood hydrolyzates by Schizosaccharomyces  
Pombe. Trudy Inst. mikrobiol. no. 6:203-211 '59. (MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i  
sul'fitno-spirtovoy promyshlennosti.  
(SCHIZOSACCHAROMYCES) (WOOD)

KALYUZHHYY, M.Ya.; LOGINOVA, L.G.; OSTANIN, S.N.; BOLOVDZ', G.V.;  
SELIVERSTOVA, L.A.; IVANOVA, Z.T.

Results with fermentation of wood hydrolysates with thermophil  
yeasts. Trudy Inst. mikrobiol. no.3:73-80 '54. (MLRA 8:3)

(YEASTS,

Saccharomyces cerevisiae, fermentation of wood  
hydrolysates)

(FERMENTATION,

of wood hydrolysates with Saccharomyces cerevisiae)

*Ivanova, Z. T.*

Biological treatment of waste water from hydrolytic plants.  
K. E. Drublyanets, I. K. Saitenov, N. I. Tkachenko, A. V. Tsalkova, and Z. T. Ivanova. *Gidrobiol. i Limnolog. Pror.* 8, No. 7, 13-16 (1933).—The results from the plant runs

carried out in 2 types of waste-treatment installations are reported. "Biofilters" (I) are shallow filter beds filled with coke, cinder, or gravel. These particles are surrounded by a membrane of microorganisms. In "aerotanks" (II) the microorganisms are sorbed to the "active slurry" (III). Waste water is partially neutralized, thoroughly aerated, and transferred to a tank where it is diluted with fresh river water and furnished with nutrient salts ( $(NH_4)_2SO_4$  and a superphosphate). Thus pretreated waste water (pH 5-6.5, B.O.D. 300-400 mg. O/l., 7-9 mg. N/l., and 3-5 mg. P/l.) is carried to II over trays or is pumped to the middle of II, where it is intimately mixed with III. From II it flows into a settler, from which the settled slurry is returned to II. Artificial aeration is used in II but not in I. The capacity of II is greater than that of I, but the latter are more economical.

T. Jurcic





TRACHSHEG, N.I.; TSALIKOVA, A.V.; IVANOVA, Z.T.

Waste water of hydrolysis plants processing cottonseed hulls.  
Gidroliz. i lesokh. prom. 10 no.5:11-13 '57. (LIRA 1957)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznyy i  
sul'fitno-spirovoy promyshlennosti.  
(Water--Waste) (Hydrolysis)

DRUBLYANETS, E.E.; IVANOVA, Z.T.

Purification of furfurole-containing waste waters by means of  
a biochemical filter. Gidroliz i lesokhim. prom. 13 no.1:  
10-11 '60. (MIRA 13:5)

1. Nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno  
spirtovoy promyshlennosti.  
(Hydrolysis) (Sewage--Purification) (Furaldehyde)

DRUBLYANETS, E.E.; IVANCVA, Z.T.

Nitrogen supply system to biofilters. Sbor.trud.NIIGS 12:148-154  
'64. (MIRA 18:3)

TKACHENKO, N.I.; IVANOVA, Z.T.

Studying the composition of the wastes of yeast production.  
Gidroliz. i lesokhim. prom. 18 no.5:13-14 '65. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy  
i sul'fitno-spirovoy promyshlennosti.

PROCESS AND PROPERTY INDEX

LIST AND INDI ORDERS

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*Chem. Lab. 118*

Determination of 2-methyl-1,4-naphthoquinone.  
 M. Kul'berg and Z. V. Ivanova (Nutrition Inst., Kiev).  
*Biokhimiya* 10, 483-90 (1948) (Russian summary).--To  
 the neutral alc. soln. of 2-methylnaphthoquinone, add 1  
 ml. of a 1% soln. of diethyl malonate in alc. and 0.2 ml.  
 of a 1% aq. soln. of NaOH. Make up with distd. water to  
 5 ml. Compare in a colorimeter with a standard of 10%  
 CuSO<sub>4</sub> and 10% cobalt chloride (1:1:2). The result is  
 read from a graph, where the concn. of 2-methylnaphtho-  
 quinone (0.01-0.1 mg.) is plotted against the colorimeter  
 scale; the mean error is 3%. In the presence of proteins,  
 the following variant is used: To 2 ml. of the soln. (0.01-  
 0.1 mg. 2-methylnaphthoquinone) add 1 ml. of an alc.  
 soln. of diethyl malonate and 10% soln. of NaOH until  
 the ppt. which first appears is redissolved. Make up to  
 5 ml., if necessary. Compare in the colorimeter, as above.  
 2-Methylnaphthoquinone reacts with proteins and amino  
 acids. H. Priestley

*Nutrition Inst., Kiev*

METALLURGICAL LITERATURE CLASSIFICATION

CA

7

**Detection of some organic acids present in a mixture.**  
 L. M. Kul'berg and Z. V. Ivanova. *Zhur. Anal. Khim.* 1, 311-14(1949). Procedures are described for the detection of formic, acetic, lactic, tartaric, and citric acids, particularly in the presence of alc., saccharin, and sugar.  
 To test for formic acid, acidify the sample with dil. HCl and treat with Mg metal for 1-2 min. To 2-3 drops of a soln. on a drop-plate add a drop of 0.5% of aq. soln. of phenylhydrazine hydrochloride, a drop of a 1% K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> (CN<sub>7</sub>), and 1-2 drops of concd. HCl. Bright rose color indicates the presence of CH<sub>2</sub>O<sub>2</sub>. The test for AcOH is based on the formation of the triple acetate of Na, Ni, and CO<sub>2</sub>. Prep. a reagent contg. H<sub>2</sub>O 5 ml., UO<sub>2</sub> formate 0.4, Ni formate 0.4, Na formate 1.0 g., HCOOH 0.5 ml. To the sample add a little MgO, heat slightly, draw off (microfilter) a drop of soln. onto a microscopic slide and evap. the liquid carefully. The spot on the slide should be transparent; if it is not, treat with H<sub>2</sub>O vapor until it becomes transparent. Place a small drop of reagent on the boundary of the spot resulting from evapn. and examine under a microscope (X40-120) for the presence of the cryst. triple acetate. To test for lactic acid, to 0.5 ml. of soln. add 0.5 ml. of a reagent comprising a mixt. of 18 ml. 0.1 N I soln. and 2.5 ml. 40% KI. Shake, add 2-3 drops of 40% KOH soln., and heat on a steam bath. The appearance of a bright yellow ppt. (CHI<sub>3</sub>) indicates the presence of lactic acid. This test is not applicable in the presence of alc. since it too oxidizes to acetaldehyde.

If alc. is present, neutralize the soln. with MgO, evap. to dryness, dissolve residue in H<sub>2</sub>O, filter, and proceed to test as above. To detect tartaric acid micro- and macro-methods can be used. In the micro-method, place a drop of the soln. on a microscope slide slightly coated with grease. Add a drop of a reagent (EtOH contg. 10% KOAc, 4% AcOH, and 1% aniline) stir with glass rod, add a drop of alc., and exam. under a microscope. The presence of tartaric acid is indicated by the appearance of small crystals of irregular shape. The testing reagent for citric acid is made by mixing 4 ml. of concd. H<sub>2</sub>SO<sub>4</sub> and 20 ml. of H<sub>2</sub>O and dissolving 1 g. of HgO in the hot soln. To test for citric acid, mix a drop of the test soln. with a drop of reagent (4 ml. concd. H<sub>2</sub>SO<sub>4</sub> + 1 g. HgO + 20 ml. of water) and a drop of 0.08% KMnO<sub>4</sub> soln. Heat on the steam bath for 2 min. A white heavy ppt., Hg acetone decarboxylate, indicates the presence of citric acid. Saccharin interferes with this test and should be removed. To this end, acidify (to Congo red) the test soln. with H<sub>2</sub>SO<sub>4</sub> and shake in a separatory funnel with Et<sub>2</sub>O. Test for citric acid in theq. layer as described, by using somewhat more KMnO<sub>4</sub>. These tests are particularly applicable to the testing of soft drinks. To a 5-10 ml. sample, add 0.1-0.5 g. of MgO, evap. to dryness, and add 1-2 ml. H<sub>2</sub>O. If the beverage contains alc., evap. to 1-2 ml. Stir thoroughly, filter, and proceed to test as described.

M. Hoch

CA

New highly sensitive tests for detecting hypochlorites and bromates in the presence of other oxidizing agents. L. M. Kul'berg and Z. V. Ivanova. *Zhur. Anal. Khim.* 2, 43-5(1947).—As reagent *p,p'*-dihydroxytriphenylmethane is used which, reacting with Br<sub>2</sub>, Cl<sub>2</sub>, or I<sub>2</sub>, forms dihalophenophenylmethylenedihaloquinone. Hypochlorites, hypobromites, and hypiodites react with dihydroxytriphenylmethane in neutral or weakly alk. solns. to form colored products. The test is conveniently carried out on filter paper satd. with an EtOH soln. of the reagent. The presence of ClO<sup>-</sup> and BrO<sub>3</sub><sup>-</sup> is indicated by: ClO<sup>-</sup> and BrO<sub>3</sub><sup>-</sup> absent, neg. reaction; ClO<sup>-</sup> present, violet; ClO<sup>-</sup> present, after addn. of KBrO<sub>3</sub>, blue; ClO<sup>-</sup> and BrO<sub>3</sub><sup>-</sup> present, blue; BrO<sub>3</sub><sup>-</sup> present, neg.; BrO<sub>3</sub><sup>-</sup> present, after addn. of Cu(OCl)<sub>2</sub>, blue. The presence of other oxidizers such as permanganate, dichromate, ferricyanide, nitrite, chlorate, iodate, persulfate ions and H<sub>2</sub>O<sub>2</sub> do not interfere with this test. Seven-tenths γ of active Cl can be detected by this method. Addn. of a few drops of lit. water or KBrO<sub>3</sub> followed by slight warming permits the detection of 0.2 and 0.03 γ of active Cl. The limit for BrO<sub>3</sub><sup>-</sup> is 0.2 γ. M. Hosh

ASAC-11A METALLURGICAL LITERATURE CLASSIFICATION

*id*

New principles for distinguishing homologs, isomers, and organic compounds of similar structure. L. M. Kulberg and Z. V. Ivanova, *Zhur. Anal. Khim.* 2, 198-200 (1947). This method of identification is based on the specific reactions of org. compds. with inorg. ones to yield products of distinct and different characteristics.

To distinguish *o*- from *β*-naphthol, place a grain of *m*-nitroaniline on a spot-plate, dissolve it in 2 drops of 1% HCl and add a drop of 0.2% NaNO<sub>2</sub> soln. A microdrop of this mixt. should leave a blue spot on Congo paper. To this mixt. add a grain of the tested naphthol and, with const. stirring, an excess of 10% NaOH. Add 2 drops of a 1% MgSO<sub>4</sub> or MgCl<sub>2</sub> soln. and stir thoroughly. A red-purple colored ppt. indicates *o*-naphthol and a bright-purple colored ppt. indicates *β*-naphthol. To distinguish between pyrocatechol and resorcinol and hydroquinol, place a grain of the unknown on a spot plate, dissolve it in a drop of H<sub>2</sub>O and add 1 drop of a 1% FeCl<sub>3</sub> soln., 1 drop of a 1% AcOH soln., and 1 drop of a 1% NaOH soln. If pyrocatechol is present, a bright-purple color will appear. If hydroquinol or resorcinol is present, a brown Fe(OH)<sub>3</sub> ppt. will form. Resorcinol and orcinol are distinguished by their specific reaction with Be when they are coupled with diazotized *p*-nitroaniline. Diazotize a grain of *p*-nitroaniline on a spot-plate and add a drop of 10% NaOH soln. and a grain of the unknown. Stir and add a drop of a 1% Be salt soln. Resorcinol forms a red-purple ppt. while orcinol forms an orange-red ppt. Purpurin and isopurpurin are distinguished by their characteristic colors which they yield with heavy metals. Dissolve a grain of the unknown in a drop of alc. Transfer the soln. (with a capillary) onto filter paper and allow the alc. to evap. Place 1 drop of a 1% salt soln. onto a spot on the filter paper. Expose the filter paper to NH<sub>3</sub> vapors and then dip the paper for 2-3 sec. in a 0.5% AcOH soln.

and observe with purpurin and isopurpurin, resp. the following colors: salts of Th<sup>4+</sup> dark violet, red-purple; of Be<sup>2+</sup> pink, yellow; of CO<sub>3</sub><sup>2-</sup> purple, green; of Pb<sup>2+</sup> purple, muddy yellow; of Cd<sup>2+</sup> pink, yellow. *o*-Aminophenol is distinguished from *β*-aminophenol by their reaction with Cu. Dissolve a grain of the unknown in 1-2 drops of alc. and add a drop of a 10% CuSO<sub>4</sub> soln. In the presence of the *ortho* compd. a purple-red color appears and in the presence of the *para* compd. the color remains the faint-blue of CuSO<sub>4</sub>. To distinguish *o*- from *m*-aminobenzoic acid dissolve a grain of the unknown in a drop of a 1% NaOH soln. Add a few drops of H<sub>2</sub>O, a drop of 1% CuSO<sub>4</sub> soln., and 2 drops of a 2% AcOH soln. *m*-Aminobenzoic acid yields a blue color while *o*-aminobenzoic acid yields a bright-green color. Aniline is distinguished from *o*-toluidine by their reaction with Mg. Dissolve a grain of *p*-nitroaniline in 2 drops of 1% HCl. Add a drop of 0.2% NaNO<sub>2</sub> soln. and a microdrop of the tested aniline soln. After a few sec. add 2 drops of 1% Mg salt soln. and a few drops of 10% NaOH soln. and mix thoroughly. Aniline is indicated by a bright-pink ppt. and *o*-toluidine by a purple-blue ppt. To differentiate between *p*-phenylenediamine and dimethyl-*p*-phenylenediamine dissolve a grain of the amine in a drop of alc., add 2 drops of a satd. soln. of 1,2-naphthoquinone-4-sulfonic acid in 50% alc., 2 drops of a 0.5 N NaOH soln., and a drop of a 1% Cd nitrate or chloride soln. *p*-Phenylenediamine forms a red ppt. while the dimethyl deriv. forms a bright-blue ppt. *o*-Phenylenediamine is distinguished from *m*- and *p*-phenylenediamine by its reaction with the uranyl ion. Dissolve a grain of the diamine in alc. and add a drop of a satd. naphthoquinonesulfonic acid in 50% alc. Add 2 drops of 0.5 N NaOH soln. and a drop of a 1% CO<sub>2</sub>(OAc)<sub>2</sub> soln. A dark-red color indicates *o*-phenylenediamine. *p*-Phenylenediamine is differentiated from the *m* compd. by



their reaction with  $\text{CuSO}_4$ . A drop of a 2%  $\text{CuSO}_4$  when added to a soln. of a grain of the diamine in a drop of alc. forms a brown red ppt. with *p*-phenylenediamine and a green yellow ppt. with *m*-phenylenediamine. To distinguish *p*-phenylenediamine from 1,4-diamino-2-methylbenzene dissolve a grain of the complt. in 2-3 drops of  $\text{Me}_2\text{CO}$  and add a drop of 1%  $\text{CuSO}_4$  soln. and a drop of 1%  $\text{NH}_4\text{CNS}$  soln. A violet color indicates *p*-phenylenediamine and a purple-red indicates 1,4-diamino-2-methylbenzene. To distinguish between benzidine and *o*-tolidine, dissolve a grain of the unknown in a drop of  $\text{Me}_2\text{CO}$  and transfer (with a capillary) the soln. on filter paper. To the spot on the filter paper add a drop of 1%  $\text{CuSO}_4$  soln. and a drop of 10%  $\text{KNO}_3$  soln. Benzidine is indicated by red-brown color while *o*-tolidine by dark blue. To differentiate among *m*-, *o*-, and *p*-nitroaniline, place a grain of the unknown in a microcrucible, add 2-3 drops of 1%  $\text{HCl}$  and 2 drops of 0.2%  $\text{NaNO}_2$  soln. Divide the soln. into 2 parts and add to one a drop of 0.5% alk.  $\alpha$ -naphthol soln., 2 drops of 1%  $\text{Mg}$  salt soln., and several drops of 10%  $\text{NaOH}$  soln. To the other half add the same reagents except that  $\alpha$ -naphthol is replaced by  $\beta$ -naphthol. With  $\alpha$ -naphthol and  $\beta$ -naphthol, resp., the following colors are given: *m*-nitroaniline red-lilac, bright-pink; *o*-nitroaniline violet, yellow; *p*-nitroaniline blue, dirty-pink. To distinguish between dimethyl- and diethylaniline, to a drop of the aniline add 2-3 drops of  $\text{H}_2\text{SO}_4$  (1:1), 3 drops of 1%  $\text{K}_3\text{Fe}(\text{CN})_6$  soln., and 2-3 drops of 1%  $\text{Zn}$  acetate soln. A bright-red ppt. indicates diethylaniline and an orange ppt. dimethylaniline. To distinguish benzene from toluene, place 2 drops of the hydrocarbon in a micro-test tube and add 3-4 drops of a nitrating mixt. (concd.  $\text{H}_2\text{SO}_4$  1.25 and  $\text{HNO}_3$  (1.4) 1 part). Heat for 1-2 min. on a microburner. Dil. with  $\text{H}_2\text{O}$  and suck up the  $\text{H}_2\text{O}$  with a capillary attached to a bulb. Wash with a 1% hydroxide soln. and remove it the same way. Dissolve the residue in a few drops of glacial  $\text{AcOH}$ , add a small shaving of metallic  $\text{Mg}$ , and heat to reduce the nitro

compt. to an amine. Place a grain of *p*-nitroaniline on a spot plate and dissolve it as above. To the resulting diazonium add a drop of 10% hydroxide soln. and immediately 2-3 drops of the same. Add 2-3 drops of 10%  $\text{NaOH}$  soln. A red purple ppt. indicates benzene while a lilac ppt. indicates toluene. Barbituric acid is distinguished from its Et deriv. by its reaction with  $\text{NaNO}_2$ . Dissolve a grain of the unknown in a drop of 50% alc. Add a drop of 0.1%  $\text{NaNO}_2$  soln. and heat for 1 min. on a microburner. Cool and add a drop of 0.01%  $(\text{NH}_4)_2\text{Fe}(\text{SO}_4)_2$  soln. Barbituric acid gives a blue-violet color, the diethyl deriv. as well as the diphenyl and ethylphenyl derivs. remain colorless. To differentiate between pyridine and piperidine, add to a microdrop of the unknown on a spot plate 2 drops of a concd.  $\text{NH}_4\text{CNS}$  soln. and a drop of 1%  $\text{CuSO}_4$  soln. Pyridine gives a bright-green ppt. while piperidine colors the soln. pale blue. Antipyrine and pyrimidone are distinguished by their reaction with  $\text{FeCl}_3$ . Dissolve a grain of the unknown in a drop of alc. and add a drop of 0.5%  $\text{FeCl}_3$  soln. Antipyrine gives a

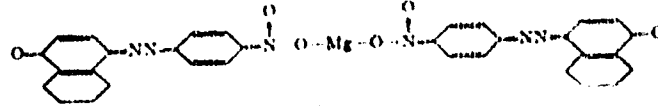
red color and pyrimidone a blue. Heat the microcrucible contg. the soln. on a microburner to a boil. Cool and add a drop of the  $\text{FeCl}_3$  soln. Antipyrine does not change the color; the color of the pyrimidone soln. is destroyed. 8-Hydroxyquinoline is differentiated from its 5,7-dibromo deriv. by its reaction with  $\text{CO}_2$ . Dissolve a grain of the quinoline in 2-3 drops of alc. and add a drop of 1% uranyl acetate soln. 8-Hydroxyquinoline gives a bright red-orange ppt. while the dibromo deriv. colors the soln. pale yellow.

M. Hoesch

PROCESSES AND PROPERTIES

Hydroxy- and aminoazo compounds. III. Char-  
acteristic grouping for magnesium. I. M. Kulberg and  
Z. V. Ivanova. *Zhur. Obshch. Khim.* (J. Gen. Chem.)  
17, 601-12 (1947); cf. C.A. 34, 43. (1) Twenty-six dyes  
were tested for color reactions with Mg salts, i.e. for the  
color change produced on addn. of a few drops of a 0.1%

soln. of the dye in 10% alkali (aq. or EtOH + H<sub>2</sub>O),  
depending on the soly., plus an excess of 10% alkali, to  
a soln. of Mg salt, resulting in the formation of charac-  
teristically colored compls. of the type shown with the  
pptg. Mg(OH)<sub>2</sub>. The following data give the color of the

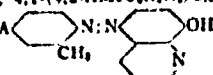


soln. of the dye in 10% alkali, the color of its compl. with  
Mg(OH)<sub>2</sub>, and the min. concn. of Mg (in g/ml.): in the  
formulas, the symbol A stands for p-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>N=N-;  
I, p-A C<sub>6</sub>H<sub>4</sub>OH, red-lilac, 10; II, 1,4-AC<sub>6</sub>H<sub>3</sub>OH, violet,  
bright sky-blue, 3; III, 1,3-A C<sub>6</sub>H<sub>3</sub>OH, red-lilac, blue-  
violet, 10; IV, 1,2,4-AC<sub>6</sub>H<sub>3</sub>(OH), red-lilac, blue, 5; V,  
2,6-A(HO)C<sub>6</sub>H<sub>3</sub>CO<sub>2</sub>H, orange, cherry-red, 100; VI,



A OH, red-lilac, blue, 5; VII, 3,4,6-(HO)<sub>3</sub>C<sub>6</sub>H<sub>2</sub>A

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apricot, red-violet, 100; VIII, 3,2,5-A(HO)(H<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>CO<sub>2</sub>H, lilac-red, blue, 5; IX, 3,4,5,2,7-A(HO)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>(SO<sub>2</sub>H)<sub>2</sub>, lilac-red, blue, 3; X, p-AC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub>, pink, red-violet, 50; XI, 3,4-Me(H<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>A, red, lilac, 5; XII, 3,5,2-MeC(H<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>A, light pink, violet-red, 5; XIII, 3,5,2-MeC(H<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>A, pink, red-lilac, 10; XIV, p-AC<sub>6</sub>H<sub>4</sub>NHPh, orange, pink, 200; XV, 5,3-A(H<sub>2</sub>N)C<sub>6</sub>H<sub>3</sub>CO<sub>2</sub>H, orange, cherry-red, 20; XVI, 2,4-(H<sub>2</sub>N)<sub>2</sub>C<sub>6</sub>H<sub>2</sub>A, pink, lilac, 10; XVII, 4-H<sub>2</sub>NC<sub>6</sub>H<sub>3</sub>A, pink, blue, 25; XVIII, 2-H<sub>2</sub>NC<sub>6</sub>H<sub>3</sub>A, light-pink, red-lilac, 50; XIX, 3,4-A(H<sub>2</sub>N)-C<sub>6</sub>H<sub>3</sub>(SO<sub>2</sub>H), apricot, red, 10; XX, 4,1-(p-AC<sub>6</sub>H<sub>4</sub>N)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>OH, violet, blue, 0.5; XXI, 4,1-(4,2-AMeC<sub>6</sub>H<sub>3</sub>N<sub>2</sub>)C<sub>6</sub>H<sub>3</sub>OH, violet, blue, 3; XXII, A 

pink, violet, 1; XXIII, 1,3-(4,2-AMeC<sub>6</sub>H<sub>3</sub>N<sub>2</sub>)C<sub>6</sub>H<sub>3</sub>OH, pink, lilac, 10; XXIV, 4,1,3-(p-AC<sub>6</sub>H<sub>4</sub>N<sub>2</sub>)C<sub>6</sub>H<sub>3</sub>(OH)<sub>2</sub>, lilac, blue, 5; XXV, 4,1,3-(4,2-AMeC<sub>6</sub>H<sub>3</sub>N<sub>2</sub>)C<sub>6</sub>H<sub>3</sub>(OH)<sub>2</sub>, pink, lilac, 5; XXVI, 3,4,5,2,7-(4,2-AMeC<sub>6</sub>H<sub>3</sub>N<sub>2</sub>)(HO)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>(SO<sub>2</sub>H)<sub>2</sub>, lilac, blue, 3. The highest sensitivity for Mg<sup>++</sup> is evidently linked with the grouping -N=N-C-

C-C-C-OH. Some of the dyes enumerated above react also with other ions, besides Mg<sup>++</sup>, thus, I with Cd<sup>++</sup>, Co<sup>++</sup>, Ca<sup>++</sup>, H<sup>+</sup>, Ca<sup>++</sup>, Ni<sup>++</sup>, Cl<sup>-</sup>, Cu<sup>++</sup>; IV, Ni<sup>++</sup>, Cu<sup>++</sup>; IX, Ca<sup>++</sup>, Cd<sup>++</sup>, Cu<sup>++</sup>, Bi<sup>+++</sup>; X, Co<sup>++</sup>, Bi<sup>+++</sup>; XIII, Bi<sup>+++</sup>, Cu<sup>++</sup>; XVII, Bi<sup>+++</sup>; XVIII, Cu<sup>++</sup>; XIX, Cu<sup>++</sup>; Ce<sup>+++</sup>, Th<sup>++++</sup>; XX, Ca<sup>++</sup>, Co<sup>++</sup>, Bi<sup>+++</sup>, Cu<sup>++</sup>; XXI, Ca<sup>++</sup>, Cu<sup>++</sup>; XXIV, Ni<sup>++</sup>, Mn<sup>++</sup>; XXV, Cu<sup>++</sup>; XXVI, Ni<sup>++</sup>, Pb<sup>++</sup>, Th<sup>++++</sup>. The following data give, for 4 dyes which do not react with any ion other than Mg<sup>++</sup>, the limiting ratios of the amts. of the foreign ion and Mg<sup>++</sup> at which the latter can still be detected [foreign ions in the order Cd<sup>++</sup>, Ni<sup>++</sup>, Cu<sup>++</sup>, Bi<sup>+++</sup>, Fe<sup>+++</sup>,

Ca<sup>++</sup>, Co<sup>++</sup>, Mn<sup>++</sup>]: VI, 100, 10, 5, 2.0, 10, 500, 5, 10; XI, 200, 5, 10, 300, 1, 25, 10, 10; XII, 50, 1, 10, 300, 1, 25, 10, 10; XXII, 25, 10, 5, 200, 5, 200, 10, 10. Thus, only ions giving colorless hydroxides are noninterfering in large amounts. The interference by ions forming amphoteric hydroxides is illustrated by the following data of the limiting ratio foreign ion/Mg<sup>++</sup>, for the same 4 dyes, and the foreign ions Al<sup>+++</sup>, Cr<sup>+++</sup>, Zn<sup>++</sup>, Fe<sup>++</sup>, Pb<sup>++</sup>, Sn<sup>++</sup>: VI, 1, 5, 10, 500, 500, 25; XI, 1, 10, 0.5, 300, 500, 5, 10, 0.5, 10, 0.5, 300, 300, 15; XXII, 0.5, 5, 0.5, 500, 300, 15. Thus, Al<sup>+++</sup> and Zn<sup>++</sup> suppress the Mg<sup>++</sup> reaction very strongly, probably as a result of inhibition of the tautomeric transformation with it appreciably. (2) The combination o,p-HO(NH<sub>2</sub>)-Ar-N=N-Ar'-NH<sub>2</sub> is evidently characteristic from the point of view of reaction for Mg<sup>++</sup>. XXI is the most sensitive, VI the most specific reagent. These compds. are synthesized as follows. VI

0.60 g. p-ONC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub> is dissolved in 5 ml. HCl (1:1), the filtered soln. poured onto 10 g. ground ice, 0.4 g. NaNO<sub>2</sub> in 1.5 ml. H<sub>2</sub>O added, then 0.75 g. 8-hydroxyquinoline in 5% HCl is added over 10 min., the acid neutralized with finely ground Na<sub>2</sub>CO<sub>3</sub>, the soln. acidified with AcOH, stirred 30 min. and, after addn. of concd. Na<sub>2</sub>CO<sub>3</sub>, filtered, and the ppt. washed and dried in air. The reagent is a 0.1% soln. in 1% alc. alkali. XXI: 0.30 g. p-ONC<sub>6</sub>H<sub>4</sub>NH<sub>2</sub> is diazotized as above with 0.35 g. NaNO<sub>2</sub>, 0.53 g. o-toluidine in HCl (1:1) added over 10 min., the soln. neutralized with Na<sub>2</sub>CO<sub>3</sub> (to violet with Congo), stirred 10-15 min., filtered, and the ppt. washed; 0.125 g. of the dye thus obtained is refluxed with concd. HCl contg. 3.5% alc. to almost complete soln.; to the filtrate are added finely ground ice and 0.1 g. KBr, then 0.004 g. NaNO<sub>2</sub> in 1 ml. H<sub>2</sub>O, and, after 10 min., 0.0022 g. 1-naphthol in alc., the soln. neutralized with finely ground Na<sub>2</sub>CO<sub>3</sub>, treated with AcOH, stirred 10-15 min., filtered after addn.

(cont) 10

of  $\text{Na}_2\text{CO}_3$  soln., and the ppt. washed with distd.  $\text{H}_2\text{O}$  and dried in air; a 0.1% soln. in 1% alc. alkali is used. (3) The following procedure is recommended for the detection of  $\text{Mg}^{++}$  in the presence of other ions. To the neutral soln. investigated, add 10%  $\text{AcOH}$  and 10%  $\text{NaOAc}$  so as to make the total acidity 10%, and the total acetate 2% (e.g. 0.3 ml. of the  $\text{AcOH}$  soln. and 0.3 ml.  $\text{AcONa}$  soln. per ml. soln.). Then treat with a soln. of oxalic acid (prepd. by soln. of 1.5 g. oxalic acid in a min. of glacial  $\text{AcOH}$ , neutralization with dil.  $\text{NH}_4\text{OH}$ , and soln. of the turbidity in 20%  $\text{AcOH}$ ), using 1 ml. for each expected mg. of extraneous ions. Bring the vol. to 5 ml., boil on a water bath 2-3 min., filter or centrifuge, and test the filtrate for  $\text{Mg}^{++}$ . If the presence of  $\text{Cr}^{+++}$ ,  $\text{Sn}^{++}$ , or  $\text{Mn}^{++}$  is suspected in the original soln., add some cryst.  $\text{AcONa}$  (0.1-0.2 g.) after adding the oxalic acid, and proceed as above. The ppt. of extraneous ions may carry along some  $\text{Mg}^{++}$ ; the more the greater the vol. of the ppt., thus, with a total of 2.5 mg. extraneous ions, 10  $\gamma$   $\text{Mg}^{++}$  can still be detected in the filtrate; in the presence of 54 mg. the limit is 800  $\gamma$   $\text{Mg}^{++}$ . The sepn. can be improved if the operation is carried out in 2 stages, first, without excess  $\text{AcONa}$ , then after filtration and neutralization with dil.  $\text{NH}_4\text{OH}$  to phenolphthalein, then with dil.  $\text{AcOH}$ , addn. of excess  $\text{AcONa}$ , boiling 2-3 min., and final filtration. N. Thon

The filtrate is then tested for  $\text{Mg}^{++}$ .

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