

CHERNYAK, N.I. [Cherniak, M.I.]; GAVRILOV, D.A. [Havrylov, D.O.];
MANDEL', V.S.

Effect of metallurgical defects on the strength of 3Kh13 steel.
Prykl. mekh. 10 no.4:407-415 '64. (MIRA 17:10)

1. Institut mekhaniki AN UkrSSR.

L 10578-66 EWT(1)/T IJP(c) GG

ACC NR: AP5025405

SOURCE CODE: UR/0181/65/007/010/3130/3131

AUTHOR: ^{55 44} Mandel', V. S.

84
72
B

ORG: Institute of Semiconductors AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: ^{21.44, 55} Distortion of the NaF crystal lattice by impurity ions

SOURCE: Fizika tverdogo tela, v. 7, no. 10, 1965, 3130-3131

TOPIC TAGS: ion, sodium compound, fluoride, crystal lattice distortion, crystal impurity, lithium, potassium, chlorine, nuclear magnetic resonance

ABSTRACT: The intensity of the Na²³ nuclear resonance absorption line is measured as a function of the concentration of Li⁺, K⁺ and Cl⁻ ions in NaF crystals grown from a melt by the Kyropoulos procedure. The relative displacements of ions in the NaF lattice at a distance R from the impurity ion are shown in the table below.

Impurity ion	n	R, Å	r _n , Å	r _n	r _n · 10 ⁴
Li ⁺	230	11	2.0135	0.065	6.1
K ⁺	500	14	2.6735	0.075	3.4
Cl ⁻	800	16	2.8201	0.105	3.3

Card 1/2

L 10578-66

ACC NR: AP5025405

12

The first column in this table gives the number of sodium nuclei within a distorted region of radius R around the impurity ion. The relative displacements are calculated from the formula

$$s = s_0 \left(\frac{a_0}{R} \right)^3$$

Here $s_0 = \frac{1}{2} \frac{a_n - a_0}{a_0}$ is the relative displacement of adjacent ions closest to the

impurity ion; a_0 is the lattice parameter of the sodium fluoride crystal (2.3172 Å); a_n is the lattice parameter of the MF or NaX crystal (where M⁺ and X⁻ are impurity ions). The data show that deformation at the edge of the distorted region for potassium and chlorine impurities is a constant value. The anomaly in the case of lithium is explained by the fact that the lattice parameter for LiF is smaller than that of NaF, so that the displacement of ions close to the impurity is determined more by the overlapping of electron shells than by the difference in lattice parameters. In this case, the theoretical values are higher than the experimental values. The author thanks M. I. Korufel'd and V. V. Lemahov for proposing the topic and discussing the results, and also P. V. Usachev and S. N. Vasil'yev for performing the analyses. Orig. art. has: 1 table, 1 formula. 44, 55

SUB CODE: 20,07/

SUBM DATE: 17May65/

ORIG REF: 001/

OTH REF: 001

H.W.
Card 2/2

MANDEL', Ya.M.

Advanced training for fieldshers of independent fieldsher-midwife
stations. Zdrav.Ros.Fed. 2 no.10:23-25 0'58 (MIRA 11:10)

1. Glavnyy terapevt Tambovskogo oblazdravotdela.
(TAMBOV PROVINCE—MEDICINE, RURAL)

MANDEL, Ya. N.

Congress of fieldshers and midwives of Tambov Province.

Zdrav. Ros. Fed. 2 no.10:47-48 0'58

(MIRA 11:10)

(TAMBOV PROVINCE--MEDICINE, RURAL)

MANDEL', Ya.M. (Tambov)

Concerning N.A. Chernotskaia and N.N. Hazar'eva's article "On the etiology, pathogenesis, and treatment of acute leukemia." Arkh.pat. 20 no.9:92 S '58 (MIRA 11:10)

1. Iz terapevticheskogo otdeleniya Tambovskoy oblastnoy bol'nitsy (glavnyy vrach - zaslyzhenny vrach RSFSR Yu.I. Melikov). (LEUKEMIA)

MANDEL', Ya.M.

Conducting interdistrict conferences of therapists on theoretical
and practical problems. Zdrav. Res. Feder. 3 no.5:33-35 My '59.
(MIRA 12:7)

1. Glavnyy terapevt Tambovskogo oblzdravotdela.
(TAMBOV PROVINCE--MEDICINE, INTERNAL)

FALIN, V.N.; MANDEL', Ya.M.

Planning of work in a province public health department. Zdrav.
Ros. Feder. 4 no.9:12-14 S '60. (MIRA 13:9)

1. Iz Tambovskogo oblastnogo otdela zdravookhraneniya.
(PUBLIC HEALTH)

FALIN, N.N.; MANDEL', Ya.M.

Organizing research for doctors practicing in Tambov Province.
Biol. uch. med. sov. 2 no.5:24-26 3-0 '61. (MIRA 14:11)
(TAMBOV PROVINCE—MEDICAL RESEARCH)

MANDEL, Ya.M., zasluzhenny vrach RSFSR

Organization of therapeutic care in a rural area. Zdrav. Ros.
Feder. 5 no.1:22-25 Ja '61. (MIRA 14:1)

1. Iz Tambovskogo oblzdravotdela.
(TAMBOV PROVINCE--THERAPEUTICS)

SPIRIDONOVA, A. V.; MANDEL', Ya. M. (Tambov)

Incidence of diseases of the cardiovascular system as revealed
by data from a thorough study of rural districts of Tambov
Province. Zdrav. Ros. Feder. 6 no.5:12-15 My '62.
(MIRA 15:7)

(TAMBOV PROVINCE-CARDIOVASCULAR SYSTEM--DISEASES)

MANDEL'BAUM, A. B.

Cards filed under MANDEL'BOYM, A. B.

MANDEL'BAUM, A.I.; VOLKOV, K.M.

New machinery developed by the All-Union Scientific Research
Institute of the Peat Industry for the production of peat-
mineral-ammonia fertilizers. Trudy VNIITP no.18:54-71 '61.
(MIRA 17:1)

MANDEL'BAUM, A.I., inzh.

Work of the All-Union Scientific Research Institute for Peat Industry in 1959 on the industrial procurement of peat and mineral fertilizers. Torf.prom. 37 no.4:15-18 '60. (MIRA 13:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut torfyanyo promyshlennosti.

(Peat) (Fertilizers and manures)

MANDEL'BAUM, A.I., inzh.

New machines for producing peat-mineral-ammonium fertilizers.
Torf. prom. 38 no.4:12-15 '61. (MIRA 14:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut torfyanoy
promyshlennosti.
(Peat machinery) (Fertilizers and manure)

A. I. MANDELBAUM (USSR), K. I. Chekalov, N. I. Morgunov

" Production of peat fertilizers at Industrial Peat enterprises "

Report submitted for the 2nd International Peat Congress, Leningrad,
15-22 Aug 63.

CA

25

Fractionation of cellulose with cuprammonium solutions.
 N. V. Shulyatikova and D. I. Mandel'baum. *Zhur Priklad. Khim.* (J. Applied Chem.) 24, 261-73 (1951).
 Variation of the gross amt. of the cuprammonium soln with low Cu concn. can be used as a basis for fractionation of cellulose, since the soln. of cellulose requires not only a particular concn. of Cu but also a certain total amt. of Cu soln. for formation of the Cu-cellulose complex. At 0° in air liq. portions are almost completely resistant to oxidative destruction by the cuprammonium soln. Fractions that are regenerated from soln. always show an increase of the degree of polymerization. A cellulose specimen is stirred 5-10 min. in an aq. medium, filtered by suction, air-dried to 7-9% H₂O, and a 1-g. sample is placed in a dark-glass vessel (500 ml.) and treat. 1 with the desired cuprammonium soln. for 2 hrs. at 0° with stirring; the liq. portion is filtered by suction and washed with 15% NH₄OH, H₂O, 10% AcOH, and H₂O and dried. The best cuprammonium soln. contains 0.25-0.26% Cu. The results of fractionation of several specimens in respect to mol. wt. distribution are given graphically. G. M. Kowaloff

R-11 Sci Res Inst of Artificial Fibers

23

CA

The fractionation of cellulose from cuprammonium solutions. N. V. Shulyatkova and D. I. Mandelbaum. *J. Applied Chem. U.S.S.R.* 24, 291-300 (1951) (Engl. translation) —See *C.A.* 46, 252g. R. M. S.

1952

MANDEL'BAUM, D.I.

Simplified method of determining the viscosity of viscose cellulose.
Bum.prom. 30 no.1:10-14 Ja '55. (MLRA 8:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna.
(Cellulose)

The time to det. the viscosity of cellulose xanthate (I) solns. is reduced from 21 to 5.5 hrs. by the use of an emulsifying agent in the dissolving step. The finely divided pulp (0.38g. bone-dry at $9 \pm 2\%$ H₂O) is kept 15 min. in 45 cc. H₂O. One drop sulfonated oleic acid ester, 92 cc. 17.5% NaOH, and 3.2 cc. CS₂ are added, the mixt. is shaken 15 min., rotated 5 hrs. at $25 \pm 0.2^\circ$, and the viscosity ~~is within 5 millipoises of that~~ of the I soln. detd.; duplicate samples agree within 0.85 millipoises, and the viscosity is within 5 millipoises of that of an 1% I soln. detd. by the standard method (mercerization-comminution-xanthation-soln.)

MANDEL'BAUM, D.I.; KONKIN, A.A.

Effect of the polydisperse state of cellulose on the physical
and mechanical properties of viscose fibers. Report No.1.
Khim.volok. no.1:22-26 '59. (MIRA 12:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstven-
nogo volokna.
(Cellulose) (Rayon)

MANTEL'BAUM, D.I.; KONKIN, A.A.; SHULYATIKOVA, N.V.

Effect of polydisperse state of cellulose on the physical
and mechanical properties of viscose fiber. Part 2.
Khim. volok. no.2:35-40 '59. (MIRA 12:9)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo
volokna.
(Cellulose) (Rayon)

MANDEL'BAUM, D.I.; KONKIN, A.A.

Effect of the natural structure of cellulose on the physical and
mechanical properties of viscose fiber. Khim.volok. no.3:23-26
'59. (MIRA 12:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo
volokna (VNIIV).
(Cellulose) (Rayon)

MANDEL'BAUM, D. I., Cand Tech Sci (diss) -- "Investigation of the effect of poly-dispersion and structure of cellulose on the properties of viscose fiber". Moscow, 1960. 13 pp (Min Higher and Inter Spec Educ RSFSR, Moscow Textile Inst), 150 copies (KL, No 11, 1960, 133)

MANDEL'BAUM, D.I.; KONKIN, A.A.; VISHNYAKOVA, M.N.

Connection between the submicroscopic structure of natural and regenerated cellulose. Khim.volok. no.5:31-33 '60. (MIRA 13:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (for Mandel'baum, Konkina). 2. Leningradskiy tekstil'nyy institut imeni Kirova (for Vishnyakova).
(Cellulose) (Viscose)

STRUVE, K.V.; MANDEL'BAUM, D.I.

Spectral method for the analysis of mineral impurities of cellulose for chemical processing. Khim. volok. no.4:35-38 '64.
(MIRA 18:4)

1. Leningradskiy tekhnologicheskii institut kholodil'noy promyshlennosti (for Struve). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (for Mandel'baum).

EXCERPTA MEDICA Sec 8 Vol 12/11 Neurology Nov 59

5701. AN UNUSUAL CASE OF RABIES IN MAN - Niezwykły przypadek wścieklizny u człowieka - Mandelbaum J, and Podolak W. Szpit. Miejsk. Nr 1, Legnica - POL.TYG.LEK.WIAD.LEK. 1959, 14/16 (724-726)

A peasant was bitten in the face by a weasel. He had no hydrophobia, drinking water greedily when it was offered. Excitement and salivation appeared on the 5th day after admission to hospital, a few hours before death. Histopathological examination revealed Negri bodies in the brain. (L,6,8)

MANDEL 'BAUM, M.M.

VASIL'YEV, Viktor Grigor'yevich; KALENOV, Yevgeniy Nikolayevich; KARASEV, Ivan Petrovich; KRAVCHENKO, Yevgeniy Vasil'yevich; ~~MANDEL 'BAUM, M.M.~~
~~Mark Mironovskiy~~; BORISOV, A.A., redaktor; FILIPPOVA, Ye.A., vedushchiy redaktor; POLOSINA, A.S., tekhnicheskii redaktor.

[Geological structure of the southern Siberian Platform and the oilbearing prospects of Cambrian rocks] Geologicheskoe stroenie iuga Sibirskoi platformy i neftenosnost' kembriia. Pod red. A.A. Borisova. Moskva, Gos.nauchno-tekhn.izd-vo nef. i gornotoplivnoi lit-ry, 1957. 226 p. (MIRA 10:11)
(Siberian Platform--Geology, Structural) (Petroleum geology)

PRITULA, Yu.A.; SAVINSKIY, K.A.; MANDRL'BAUM, M.M.; TROIISKIY, V.N.

Means for a practical solution of the problem of oil and gas potentials of the southern part of the Siberian Platform. Geol. nefi 2 no.4:5-11 Ap '58. (MIRA 11:5)

1. Vostsibneftegeofizika.
(Siberian Platform--Petroleum geology)
(Siberian Platform--Gas, Natural--Geology)

MANDEL'BAUM, M.M.

3(5) PHASE I BOOK EXPLOITATION SOV/2544

Savinskiy, Konstantin Aleksandrovich, Mark Mironovich Mandel'baum,
Vsevolod Nikolayevich Troitskiy, Naum Iosifovich Shekht, and
Nikolay Pavlovich D'yachkov

Effektivnost' geofizicheskikh metodov razvedki v yuzhnoy chasti
Sibirskoy platformy, vpadinakh Zabaykal'ya i Dal'nego Vostoka
(Efficacy of the Geophysical Methods of Prospecting in the
Southern Part of the Siberian Platform, and in the Transbaykal
and Far East Depressions) Moscow, Gostoptekhizdat, 1959.
114 p. 2,900 copies printed.

Sponsoring Agency: Glavgeologiya RSFSR. Vostsibnefteteofizika.

Ed.: V. G. Vasil'yev; Exec. Ed.: Ye. G. Pershina; Tech. Ed.:
I. G. Fedotova.

PURPOSE: This book is intended for geophysicists, geologists,
petroleum geologists, and area specialists interested in the
Siberian region.

Card 1/4

Efficacy (Cont.)

SOV/2544

COVERAGE: The book contains the results of geophysical explorations carried out in the southern part of the Siberian platform and in the depressions of Zabaykal'ye and Zeye-Bureinskaya. Questions in the methodology of geophysical studies are examined and suggestions are made on the direction and content of future work in Eastern Siberia. Oil- and gas-bearing possibilities of the region are discussed with an eye to future economic growth. The southern part of the Siberian platform, the so-called Irkutskiy amphitheater, is cited as being particularly favored in the economic sense. Materials collected in the field are used in the work. No personalities are mentioned. There are 59 references, all Soviet.

TABLE OF CONTENTS:

Introduction	3
Brief Review of the State and Extent of Geophysical Studies	4
Efficacy of Geophysical Methods in Studying the Geological Structure of Individual Regions of Eastern Siberia	10
Card 2/4	

Efficacy (Cont.)

SOV/2544

Southwestern part of the Siberian platform	10
Gravimetric and magnetometric surveying	15
Electrical surveying	19
Historical development of the southwestern part of the Siberian platform based on the results of geophysical exploration	25
The Irkutskiy amphitheater	27
Gravimetric and aeromagnetic exploration	31
Electrical surveying	40
Seismogeological characteristics of the cross-section	51
Results of seismic exploration	60
Industrial geophysical exploration	68
The Baykal-type depressions	74
The Selenginskaya depression	74
Physical characteristics of rocks of the Selenginskaya depression	75
Gravimetric and magnetometric surveys	78
Tectonics of the Selenginskaya depression within the structural system of the Baykal'skaya mountainous region	84
Outlook for gas and oil-bearing possibilities and the basic trend in exploration	88

Card 3/4

Efficacy (Cont.)	SOV/2544	
Depressions of Western Zabaykal'ye		90
The Zeye-Bureinskaya depression		95
Rational Complex and Basic Premises of a Perspective Plan of Geophysical Exploration		105
Basic Trends of Geophysical Works in Eastern Siberia		110
Conclusion		112
Bibliography		113
AVAILABLE: Library of Congress		
Card 4/4		MM/jb 11-2-59

MANDEL'BAUM, M. M.

Cand Geol-Min Sci - (diss) "Geological structure and petroleum-bearing potential of the zone of Upper Angarskiy dislocations." Moscow, 1961. 17 pp; (Academy of Sciences USSR, Siberian Division, Main Board of Geology RSFSR, Irkutsk State Univ "Vostsibneftegeofizika"); 200 copies; price not given; list of author's works at end of text; (KL, 5-61 sup, 180)

TKALICH, S.M.; MINEYEV, I.K., glavnyy red.; RYABENKO, V.Ye., zam. glavnogo red.; TUMOL'SKIY, L.M., zam. glavnogo red.; KUR'YANOV, F.K., otv. zav vypusk; BASSOLITSYN, Ye.P., red.; BLINNIKOV, I.I., red.; DAUKSHO, Yu.Ye., red.; DZINKAS, Yu.K., red.; ZHARKOV, M.A., red.; ZAVALISHIN, M.A., red.; MANDEL'BAUM, M.M., red.; MATS, V.D., red.; MALETOV, P.I., red.; NOMOKONOVA, N., red.; NOSEK, A.V., red.; SERD, A.I., red.; SEMENYUK, V.D., red.; TAYEVSKIY, V.M., red.; TIKHONOV, V.L., red.; TROFIMUK, I.N., red.; TOMILOVSKAYA, M.V., red.; FOMIN, N.I., red.; SHAMES, P.I., red.; TROSHANIN, Ye.I., tekhn. red.

[Biogeochemical anomalies and their interpretation.] Biogeo-
khimicheskie anomalii i ikh interpretatsiia. Irkutsk, 1961.
39 p. (Materialy po geologii i poleznym iskopaemym Irkutskoi
oblasti no.3) (MIRA 17:1)

MANDEL'BAUM, M.M.

Geology and the oil and gas potential of the zone of the upper
Angara dislocations. Geofiz. issl. i probl. neftegaz. iuga Sib.
plat. no.2:3-108 '62. (MIRA 15:8)
(Angara Valley--Petroleum geology)
(Angara Valley--Gas, Natural--Geology)

PRITULA, Yu. A.; GRIGOR'YEV, V. M.; MANDEL'BAUM, M. M.; MIKUTSKIY, S. F.;
MOKSHANTSEV, K. B.; SOKOLOV, D. S.

"Oil and gas deposits of the Siberian Platform."

report submitted for 22nd Sess, Intl Geological Cong, New Delhi, 14-22 Dec
1964.

TROFIMUK, A.A.; VASIL'YEV, V.G.; KARASEV, I.P.; KOSOROTOV, S.P.;
MANDEL'BAUM, M.M.; MUSTAFINOV, A.N. [deceased]; SAMSONOV, V.V.

Basic problems of the prospecting in the Markovo oil field in
Eastern Siberia. Geol. nefiti i gaza 8 no. 1:15-20 Ja '64.

(MIRA 17:5)

1. Sibirskoye otdeleniye AN SSSR, Vsesoyuznyy nauchno-issledovatel'-
skiy institut prirodnogo gaza, Gosudarstvennyy trest po geologicheskim
izyskaniyam na nef't' v Vostochnoy Sibiri i Institut geologii i
razrabotki goryuchikh iskopayemykh AN SSSR.

MANDEL'BAUM, M.M.; MAZUR, V.B.; SAMSONOV, V.V.

Recent data on the oil and gas potential of the Irkutsk amphitheatre. Neftegaz. geol. i geofiz. no.10:9-11 '64
(MIRA 18:1)

1. Gosudarstvennyy trest po geologicheskim izyskaniyam na neft' v Vostochnoy Sibiri i trest "Vostsibneftegeofizika".

L 24872-662 EWT(1) GS/GW

ACC NR: A25028973

SOURCE CODE: UR/0000/64/000/000/0260/0272

AUTHOR: Pritula, Yu. A.; Grigor'yev, V. M.; Mandel'baum, M. M.; Mikutskiy, S. P.; Mokshantsev, K. B.; Sorokov, D. S.

ORG: none

32
B

TITLE: Oil and gas deposits of the Siberian platform

SOURCE: International Geological Congress. 22d, New Delhi, 1964. Geologiya nefti (Petroleum geology). Moscow, Izd-vo "Nauka," 1964, 260-272

TOPIC TAGS: geology, natural gas, petroleum fuel, physical geology, geologic exploration

ABSTRACT: The old Siberian Platform occupies a large territory in Central Siberia. Late Pre-Cambrian (Sinian) and Lower Paleozoic sedimentary marine formations are extensively developed on the platform, overlain by Middle Paleozoic and Mesozoic deposits over large areas. Characteristic features are the presence of rock salt in Lower Cambrian and of traps in Carboniferous-Triassic series. The main structures of the platform are: Anabar, Aldan, Patom, Yenisei, and Turukhan-Norilsk anticlines, and Angara (Irkutsk amphitheater), Tunguska, and Vilyui synclines. In the north the platform borders on the Pre-Taimyr, Anabar-Lena and Pre-Verkhoyansk fore-deeps. These major first order structures are complicated by numerous gentle swells and local uplifts. Oil and gas shows are extensively developed all over the Siberian Platform.

Card 1/2

L. 24872-66

ACC NR: *5028973*

Geological conditions in sedimentary basins on the platform and in flanking fore deeps are favorable for generation, accumulation, and preservation of oil and gas deposits. The total area of these sedimentary basins is over 3,000,000 km². Exploration for oil and gas was conducted on a limited scale. Oil- and gas-bearing formations were found in Late Pre-Cambrian, Lower Cambrian, Ordovician, Devonian, Permian, Triassic, Jurassic and Cretaceous deposits. Gas condensate was discovered in Jurassic sandstones in the Vilyui syncline and Pre-Verkhoyansk fore-deep. Lower Cambrian rocks within the Siberian Platform are regionally oil- and gas-bearing. The large Markovo light oil field was discovered in these rocks in the south of the platform. Orig. art. has: 2 figures. [Author's abstract.]

SUB CODE: 08/ SUBM DATE: 21Nov64/

Card *2/2 pla*

ACC NR: AT6023377

(N)

SOURCE CODE: UR/0000/65/000/000/0118/0123

AUTHOR: Kondrashov, V. A.; Mandel'baum, M. M.; Puzyrev, N. N.; Surkov, V. S.

ORG: none

TITLE: Technique of regional seismic investigations in Siberian platform areas

SOURCE: International Geological Congress. 22d, New Delhi, 1964. Geologicheskkiye rezul'taty prikladnoy geofiziki (Geological results of applied geophysics); doklady sovetskikh geologov, problema 2. Moscow, Izd-vo Nedra, 1965, 118-123

TOPIC TAGS: seismology, platform area, sedimentary cover, ~~reflection profile~~, seismic prospecting / *Siberia*

ABSTRACT: Regional seismic investigations conducted in platform areas of Siberia for the purpose of studying principal features of the deep structure are described. This work was performed mainly in connection with oil and gas prospecting in the area. To study the folded basement a special technique of single and linear head-wave soundings has been developed which makes it possible to investigate forest-covered areas. The results of the field work have revealed some features of the basement structure which had previously not been detected, including differentiation of the basement into layers according to their elastic properties. The sedimentary cover is investigated primarily by the reflection method in its various modifications.

Card 1/2

ACC NR: AT6028377

For regional investigations, wide use is made of single reflection soundings which are applied on a wide scale in the west Siberian lowland. Using this technique in area of nearly 50,000 km² has been surveyed. Also widely used is a technique of regional seismic-reflection profiles including profiles along the rivers. These investigations have resulted in maps and cross-section diagrams which show clearly the effectiveness of the survey. Orig. art. has: 2 figures.

SUB CODE: 08/ SUBM DATE: 06Jan65

Card 2/2

BELYAYEV, A.P., red.; BESSOLITSYN, Ye.P., red.; BLINNIKOV, I.I., red.; DZINKAS, Yu.K., red.; ZHARKOV, M.A., red.; KOROVIN, A.V., red.; KUR'YALOV, F.K., red.; MANDEL'BAUM, M.M., red.; NALETOV, F.I., red.; RYABENKO, V.Ye., red.; SAVINSKIY, K.A., red.; SERD, A.I., red.; SEMENYUK, V.D., red.; TUMOL'SKIY, L.M., red.; TIKHONOV, V.L., red.; TROFIMUK, P.I., red.; TOMILOVSKAYA, M.V., red.; POMIC, N.I., red. BEK'IN, Yu.K., ved. red.

[Recent data on the geology, petroleum potentials, and mineral resources of Irkutsk Province] Novye dannye po geologii, neftenosnosti i poleznym iskopaemyim Irkutskoi oblasti. Moskva, Nedra, 1964. 278 p. (MIRA 17:8)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye geologii i okhrany nedr. Irkutskoye geologicheskoye upravleniye.

VOROPINOV, V.S.; KENZINA, V.L.; ODINTSOV, M.M., *otv. red.*; KARASEV, I.P., *red.*; KUZNETSOV, M.F., *red.*; MANDEL'BAUM, M.M., *red.*; NEZABYTOVSKAYA, I.A., *red.*; NOSEK, A.V., *red.*; FOMIN, N.I., *red.*

[Geological studies of the U.S.S.R.] *Geologicheskaiia izuchennost' SSSR*. Moskva, Nauka. Vol.24. No.1. 1965. 177 p.
(MIRA 18:9)

AUTHOR: Mandel'baum, S.L.

SOV/115-58-1-44/50

TITLE: The Committee's Checking Organs Must Improve Their Work
(Uluchshit' deyatel'nost' poverochnykh organov Komiteta)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 1, pp 89 - 90 (USSR)

ABSTRACT: The State Control Laboratories for Measurements, which are subordinated to the Committee of Standards, Measures and Measuring Devices, are supposed to perform the following duties: supervise the departmental supervision organs; check on the conformity to standards and standard specifications, the correctness of measurements of fuels and lubricants; study new designs of instruments in use; supervise the work of instrument-building and repair plants. In practice, however, their possibilities to do this work are limited. In the Azerbaydzhan SSR, for example, 80% of the work time will be spent for state checking of instruments, and 10% will go for checking the con-

Card 1/2

SOV/115-58-1-44/50

The Committee's Checking Organs Must Improve Their Work

dition and accuracy of measuring devices and the conformity to standards and standard specifications. The main concern of the personnel seems to be the fulfilment of the state fee-collecting plan. The author thinks that no productive work can be expected from the State Control Laboratories and suggests practical organizatory measures to change the situation.

1. Standardization
2. Measurement---Standards
3. Instruments---Design
4. Instruments---Maintenance
5. Instruments---Inspection

Card 2/2

MANDEL'BAUM, S.L.

Conference on standardization in Baku. Standartizatsiia 29 no.3:
54 Mr '65. (MIRA 18:5)

MANDUL'BAUM, YA. A.

Cand Chem Sci

Dissertation: "Synthesis of Certain Effective Insecticides." 21/4/50

Scientific Inst of Fertilizers and Insectofungicides, Ministry of Chemical
Industry USSR

SO Vecheryaya Moskva
Sum 71

15A

CA

Synthesis and insecticidal properties of some esters of phosphoric acid. N. N. Mel'nikov, Ya. A. Mandel'taum, and P. V. Popov. *Doklady Akad. Nauk S.S.S.R.* 71, 485-7 (1950).—The following esters were prepd. by unspecified and undescribed methods and were tested against *Aphis fabae* and *Calandra granaria*. The figures in parentheses indicate the min. percentage content of the ester giving 100% insect kill when used in dusting powders against the two species, resp.: (*p*-O₂NC₆H₄O)₂PS(OMe), 51%; m. 145-7° (1.25-2.5; —); Et analog, 40%, m. 126-7° (0.1-0.25; 0.1-0.25); Pr analog, 65%, m. 92-3°

(—; 5.0); iso-Pr analog, 51%, m. 96-7° (—; 5.0); Bu analog, 80%, m. 57-8° (—; 5.0); (*m*-O₂NC₆H₄O)₂PS(OEt), 90%, m. 81-2° (—; 5.0); *p*-O₂NC₆H₄OPS(OMe), 80%, d₄²⁰ 1.3518, n_D²⁰ 1.5600 (0.3-0.5; —); *o*-O₂NC₆H₄OPS(OEt), 50%, d₄²⁰ 1.2551, n_D²⁰ 1.5255 (0.15-0.3; —); *m*-nitro analog, 79%, d₄²⁰ 1.2801, n_D²⁰ 1.5362 (—; 5.0); *p*-nitro analog, 80%, d₄²⁰ 1.2704, n_D²⁰ 1.5374 (0.012-0.025; 0.012-0.025); *p*-O₂NC₆H₄OPS(OPr), 65%, d₄²⁰ 1.2123, n_D²⁰ 1.5327 (—; 5.0); diiso-Pr analog, 60%, d₄²⁰ 1.2101, n_D²⁰ 1.5378 (—; 5.0); di-Bu analog, 27%, d₄²⁰ 1.1840, n_D²⁰ 1.5311 (—; 5.0); (*p*-O₂NC₆H₄O)₂PS, 50%, m. 175-6° (above 10; above 10); (MeO)₂PS (1.25-2.5; —); (EtO)₂PS (1-2.5; 0.5-1.0); DDT (over 5.5; over 5.5); benzene hexachloride (3.5-7.0; 3.5-7.0). The activity of Me and Et esters is noted and the *p*-nitro derivs. are most potent; *m*-isomers are least effective. Dialkylaryl derivs. are most active; these are liquids distillable only in high vacuum.

G. M. Kosolapoff

MANDEL'BAUM, Ya. A.; SVENTSITSKIY, Ye. I.; MEL'NIKOV, N. N.

"The New Insecticide Diethyl-4-nitrophenylthiophosphate (NIUIF-100),"
Khimicheskaya Promyshlennost', No 9, 1952, pp 1-3.

MANDEL'BAUM, YA. A.

N. N. MEL'NIKOV, YA. A. MANDEL'BAUM and I. L. VLADIMIROVA, Fertilizer and Insectofungicide Institute in Moscow

"Organic Insectofungicides. XII. Synthesis of Mixed Esters of Phosphoric and Thiophosphoric Acids", Zhur Obshchei Khim 23, 429-32 and 433-5 (1953)

All of the compounds listed in the paper are far below the insecticidal action of Parathion, which is just about the US standard at this current time. While it does not seem likely that these compounds are war agents, it actually cannot be said with certainty whether or not they are sufficiently toxic to humans to cause death or disability. The only Soviet chemical work dealing with compounds that have biological action analogous to the US and UK published material on the fluorophosphates (that is, anti-cholinesterase action) is the published research by Mel'nikov and co-workers on the synthesis and insecticidal properties of some esters of various phosphoric acids. As I have said before, the real significance of this type of work lies in the fact that it deals with anti-cholinesterases. Mel'nikov's published research in 1950 appearing in Doklady Akad Nauk SSSR 71, 485-7 is the first acknowledgment in the Soviet press of compounds related to Parathion, that is to say, compounds that are organophosphorous anti-cholinesterases.

Bigested translation of article available

SO: B-67003

GALASHINA, M. L.; VLADIMIROVA, I. L.; MANDEL'BAUM, Ya. A.; MEL'NIKOV, N. N.

Insectifuges

Organic insectifuges. Part 13. Synthesis of mixed esters of phosphoric and thiophosphoric acids containing the simplest substituents in the aliphatic radical. *Zhur. ob. khim.* 23, No. 3, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Uncl.

MANUSCRIPT YH 17

Use of labelled atoms for studying the stability of insecticide dusts containing organic thiophosphates. K. A. Gar, N. N. Melnikov, A. A. Mandel'shim, F. I. Chirskiy, and B. D. Shvartsman. *Dokl. Akad. Nauk SSSR*, 1954, 84, 131-132.

The rate of loss of P from 1% dusts of methyl p-nitrophenylthiophosphate containing ³²P and/or ³³S is greater, at the same temp., than that from ethyl pp'-dinitrodiphenylthiophosphate, and for both compounds increases with temp. (measurements at 15, 23, and 45°); it is also greater in the light than in the dark. The decrease in toxicity runs parallel to the loss of P. The major part of the toxicity of these preparations will have vanished after 4 c. yr. exposure on crops under normal conditions.

R. C. MURRAY.

Sci. Inst. Fertilizers + Insecticides

Mandelbaum, Ya. A.

An application of the method of labeled atoms in the study of resistance of *Eurygaster integriceps* to two organophosphorus insecticides and experimental study of their penetration into the plants. E. A. Gar, Ya. A. Mandelbaum, N. N. Mel'nikov, L. D. Shvetsova-Shteynberg, and E. T. Chernobay. *Doklady Akad. Nauk S.S.S.R.* 94, 1180-82 (1954).

Radical specimens of $(EtO)_3PS(OCH_2NO_2)_2$ and $EtOPS(OCH_2NO_2)_2$ were used in 1% dusts which were applied to male and female specimens of the insects. Females were generally more resistant to both insecticides than the males. A direct relation was found between the amt. of P which penetrates the insect body and the degree of poisoning, within each exptl. group. Death occurs with lower level of the di-Et deriv. than mono-Et deriv., but this is caused not by a mere difference of diffusion, since in dead specimens the difference in permeability disappears between females and males. Chrysanthemum plants were allowed to absorb through the roots aq. emulsions of the di-Et deriv. (0.05-0.2%) and the penetration to the leaves was studied radio-metrically. A spraying with even 0.2% emulsion failed to give complete control of *Aulacanthus helarponii*, although the amt. of the insecticide which penetrated the plant mass reached 0.001% of the green mass at room temp. This corresponds to 20-30 mg./kg. At lower temp. when this value reached 60 mg./kg. a considerable degree of control was attained and the insects contained up to 22 mg./kg. of the di-Et deriv. The penetration into chrysanthemum was substantially like that found in beets. However, on cabbage cultures no control was achieved by this method against *Brevicoryne brassicae*, although withering of leaves was observed at 0.05% concn. of the emulsion, or higher. In cabbage and chrysanthemum expts, considerable hydrolysis of the insecticide took place and after 30 days only the hydrolysis products remained; this process is accelerated by sunlight. Drying with 1% dust on shaded kidney beans showed 42% hydrolysis after 16 days; in sunlight almost all was hydrolyzed in 3 days. On wheat the process takes but 2 days. Thus parathion is not truly a systemic insecticide, owing to its poor penetration and stability in the plant.

G. M. Kosolov

MANDEL'BAUM, Ya. A.

USSR/Chemistry

Card : 1/1

Authors : Mandel'baum, Ya. A., Lomskina, V. I. and Mel'nikov, N. N.

Title : Synthesis of dimethyl-4-nitrophenylthiophosphate and trimethylthiophosphate marked with radioactive phosphorus (P^{32}).

Periodical : Dokl. AN SSSR, 96, Ed. 6, 1173 - 1174, June 1954

Abstract : In connection with the investigation of new phosphor-containing insecticides the authors synthesized dimethyl-4-nitrophenylthiophosphate and trimethylthiophosphate marked with radioactive phosphorus. The synthesis of above compounds was realized on the basis of the following reactions: $PSCl_3 + 2CH_3OH + 2NaOH \rightarrow (CH_3O)_2 PSCl + 2NaCl + 2H_2O$; $(CH_3O)_2 PSCl + HOC_6H_4NO_2 + Na_2CO_3 \rightarrow (CH_3O)_2 PSOC_6H_4NO_2 + 2NaHCO_3 + NaCl$. Two references.

Institution : Scientific Institute for Development of Fertilizers and Insecticides

Presented by : Academician S. I. Vol'fkovich, March 17, 1954

MANDEL'BAUM, YA. A.
USSR/Chemistry - Insecticides

Card 1/1 Pub. 22 - 20/50

Authors : Mandel'baum, Ya. A.; Vladimirova, I. L.; and Mel'nikov, N. N.

Title : Synthesis of diethyl-4-nitrophenylthiophosphate and ethyl-4,4'-dinitrophenylthiophosphate marked with radioactive P³² and S³⁵

Periodical : Dok. AN SSSR 100/1, 77-79, Jan 1, 1955

Abstract : The synthesis of insecticides containing phosphor (diethyl-4-nitrophenylthiophosphate and ethyl-4,4'-dinitrodiphenylthiophosphate), is described. The methods employed in the synthesis of the insecticides were first tested on inactive substances. In selecting the proper synthesis method it was necessary to take into consideration the comparatively short period of P³² semi-decomposition. The results obtained during the synthesis with marked radioactive P³² and S³⁵ are listed. Two USSR references (-).

Institution : The Ya. V. Samoilov Scientific Institute on Matters of Fertilizers and Insecticides

Presented by: Academician S. I. Vol'fkovich, March 17, 1954

MARDELBAUM, YA. D.

Methyl ethyl 2-ethylmercaptosethyl thionophosphate. N. N.
Mandelbaum, Ya. A. Mandelbaum, V. I. Lomakina, and
P. V. Popyov. U.S.S.R. 103,275, Nov. 25, 1956. A mixt.
of MeEtP(S)Cl and $\text{HOCH}_2\text{CH}_2\text{SEt}$ with NaOH gives
 $\text{MeEtP(S)OCH}_2\text{CH}_2\text{SEt}$, used as an insecticide.
M. Hoesch

6
4

gmb
pm
mpe

MANDEIBAU^MM, Ya. A. and MEL'NIKOV, N. N.

"Preparation of Dialkyl Chlorothiophosphates"
paper presented at Nn First Conference of Phosphorous Compounds, Kazan,
8-10 Dec 56

SO: B-3,084, 841

MANDELBAUM, YA. A.

Organic insecticides. XVIII. New method of preparation of esters of chloro- and dichlorothiophosphoric acids. Z. M. Bakanova, Ya. A. Mandelbaum, N. N. Mel'nikov, and E. I. Svetsitskii. *Zhur. Obshchei Khim.* 26, 494-5 (1956); cf. *C.A.* 50, 2415d. — Refluxing fine Al wire in 2-4 fold excess of abs. EtOH in the presence of 0.1 g. Hg(OAc)₂ and a little iodine for activation of Al, until all Al goes into soln. results in a rapid prepn. of Al(OEt)₃. With an equimolar amt. of EtOH, C₂H₅ is used as a diluent and the reaction is much slower. To 17 g. PSCl₂, there was added with cooling a soln. from 0.5 g. Al and 3 g. EtOH in 8 ml. C₂H₅; after 3 hrs. at 50° the mixt. was washed with ice-H₂O acidified with HCl, dried, and distd., yielding 40% EtOPSCl₂, b_m 68°, d₄ 1.3963, n_D 1.5030. To 34 g. PSCl₂ was added with cooling a soln. from 2 g. Al and 25 ml. EtOH; after 2 hrs. at 50-60° the cooled mixt. was washed with cold H₂O acidified with HCl, yielding 42% (EtO)₂PSCl, b_m 96-9°, d₄ 1.2015, n_D 1.4670. XIX. Synthesis of mixed esters of dithiophosphoric acid containing an amide group in the aliphatic ester radical. K. D. Shvetsova-Ssilovskaya, N. N. Mel'nikov, and N. I. Martem'yanova. *Ibid.* 496-8. — Appropriate aldehydes and esters of tartaric acid were mixed and treated with (RO)₂PS₂H; after standing 1-3 days at room temp. the products were extd. with C₂H₅, washed with H₂O, dried and distd. No other details are given. Thus were prepd.: (RO)₂P(S)SCH₂NR'CO₂R' (R, R', R'', % yield, b.p., d₄, and n_D given): Me, H, Et, 38.3, b_m 107-10°, 1.3498, 1.5091; Et, H, Et, 42, b_m 64-8°, 1.1904, 1.4690; Pr, H, Et, 60.7, b_m 82°, 1.4686, 1.4912; iso-Bu, H, Et, 46.6, b_m 122-4°, — (m. 23°); Et, Me, Et, 30.8, b_m 107-14°, 1.1814, 1.5041; Bu, Me, Et, 53.7, b_m 145-52°, 1.0676, 1.4870; iso-Bu, Me, Et, 67.5, b_m 124-7°, 1/2

Sci. Inat. on Nutrients, Fertilizers and Insecticides

Bakanova, Z. M., Mandel'baum, Ya. A. . .

1.0591, 1.4840; *Et, Et, Et*, 52.5, *ba*, 108-13°, 1.0301, 1.4807; *Et, Et, iso-Pr*, 65, *ba*, 112-20°, 1.1118, 1.4867; *iso-Pr, Et, iso-Pr*, 39.2, *ba*, 113-20°, 1.0580, 1.4820; *Bu, Et, iso-Pr*, 70.5, *ba*, 136-40°, 1.0718, 1.4890; *Bu, H, Et*, 80.8, *ba*, 109°, 1.2523, 1.5000. (RO)P(S)SCHMeNR-CO₂R: *Et, H, Et*, 44, *ba*, 74-83°, 1.1592, 1.4896; *iso-Pr, H, Et*, 39.6, *ba*, 90-3°, 1.1008, 1.4744; *iso-Bu, H, Et*, 43.3, *ba*, 95-114°, 1.0845, 1.4906; *Me, Et, Et*, 25.4, *bi*, 70-1°, 1.1826, 1.4880; *Pr, Et, Et*, 18.8, *ba*, 75-85°, 1.0703, 1.4926; *iso-Pr, Et, Et*, 33, *bi*, 99°, 1.0793, 1.4790; *iso-Bu, Et, Et*, 61, *ba*, 92-103°, 1.0554, 1.4855; *Me, Et, iso-Pr*, 30, *ba*, 65-75°, 1.0595, 1.4973. The substances are said to be weak contact insecticides, but unspecified ones have fairly strong systemic activity.

G. M. Kosolapoff

7/2

BAKANOVA, Z.M.; MANDEL'BAUM, Ya.A.; MEL'NIKOV, N.N.

Organic insectofungicides. Part 22. Interaction of dialkylchloro-
thiophosphates with *p*-nitrophenol in the presence of pyridine
hydrochloride. Zhur.ob.khim. 26 no.9:2575-2577 S '56. (MLRA 9:11)

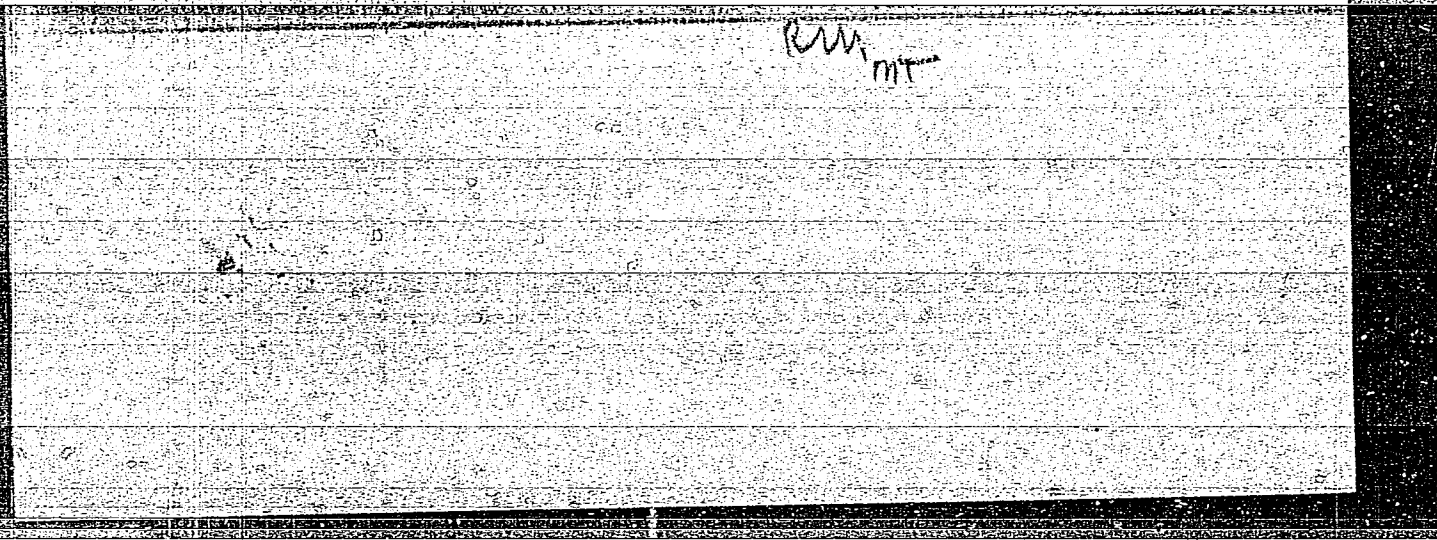
(Thiophosphates) (Nitrophenol)

MANDEL'BAUM, Ya.A.; MEL'NIKOV, N.N.; LOMAKINA, V.I.

Organic insectofungicides. Part 25. Synthesis of mixed esters
of thiophosphoric acid. Zhur.ob.khim. 26 no.9:2581-2583 8 '56.
(MLRA 9:11)

(Thiophosphates)

MANDELBAUM, V. A.



Mandelbaum, Ya. A.

Preparation of dialkyl chlorophosphates, N. N. Melnikov and Ya. A. Mandelbaum (Simolov Sci. Research Inst. Fertilizers and Insecticides, Moscow). *Khim. i Primenenie Fosfororgan. Soedinenii*, Akad. Nauk S.S.S.R., Study 1-of Kossferents., 1955, 125-93 (Pub. 1957).—Prepn. of $(EtO)_2PSCl$ from PCl_5 and $EtOH$ gives 60-65% yields if the reaction is run in the presence of an org. base, best in CCl_4 . Use of CCl_4 as the solvent lowers the yield, while PCl_5 introduces unstated impurities, besides yielding up to 30% $EtOPSCl_2$. Presence of H_2O or excess $EtOH$ lowers the yield owing to formation of the ovro ester: Et_2N or Ph_2N .

... with crude picouic bases the reaction can be run without a solvent yielding 45-60% desired chloride. Deficiency of the org. base results in evolution of much EtCl . Yields of 60-85% are attained also by adding 1 mole dry EtOH to 1 mole PSCl_2 (temp. rise to 30-40°), followed by addn. of 0.5 mole EtOH (temp. rise to 45-7°) with percolation of the mixt. with N 3 hrs. at this temp.; when the mixt. is cooled under 15° and treated slowly with NaOH in abs. EtOH (8.1 g. NaOH in 55 ml. EtOH per 0.1 mole PSCl_2), kept 1 hr. at 20°, aild. with H_2O , dried, and distd., there is formed 60-65% $(\text{EtO})_2\text{PSCl}$. Solid NaOH or its aq. soln. can be used also. The product contains 2.8% BiOPSCl_2 . A yield of 80% is attainable as follows: to Mg shavings is added 0.05 g. iodine and a little CCl_4 , after which enough abs. EtOH (not over 0.2% moisture) is added to

1/2

MELNIKY, N. N., MANDEL'BAUM, Ya. A.

cover the Mg and the reaction is allowed to commence; the addn. of EtOH is continued, keeping the mixt. boiling until all the Mg is dissolved (4.5-5 moles/g.-atom Mg is needed, since the Mg ethoxide contg. 3 moles EtOH of crystn. gives the best results). A suspension of 1.1 mole $(EtO)_2Mg$ in abs. EtOH is then added to 1 mole PCl_5 ; below 35° over 50 min.; after stirring 1-2 hrs. at $45-60^\circ$, the mixt. is cooled and dild. with H_2O (any ppt. of $Mg(OH)_2$ is dissolved in HCl), the sepd. oil being sepd., dried, and distd. The product contains in crude state 2-4% $(EtO)PSCl_2$ and up to 5% $(EtO)_2PS$. If PCl_5 contains over 2-3% PCl_3 , the yield is severely reduced. A simpler procedure: to 340 g. PCl_5 , was added in 15-30 min. 150 ml. abs. EtOH (temp. rise to $35-40^\circ$) after which dry N is percolated through the mixt. at $45-7^\circ$ 3-3.5 hrs. until HCl evolution stops, then the percolation is continued 40 min. to remove residual HCl at $10-15^\circ$; the residue is treated over 40 min. with $(EtO)_2Mg$ prepd. from 31 g. Mg and 650 ml. abs. EtOH; the addn. is made at $30-5^\circ$, after which the mixt. is stirred 60-90 min. at 60° , cooled and quenched in H_2O ; the yield of pure $(EtO)_2PSCl_2$ is 72%, with 3% $(EtO)PSCl_2$ and 1.5% $(EtO)_2PS$ also being formed. Use of $(EtO)_2Al$ in this reaction gives but 40-5% yields and leads to some loss of S by the P component. For prepu. of $(MeO)_2PSCl_2$ the aq. NaOH method (above) is best. The calcd. amt. of MeOH is added to PCl_5 at -8° , followed by NaOH (in aq. solu., in MeOH, or as solid powder) below 0° ; 10% excess NaOH is recommended. After keeping at 20° until the reaction is complete (tested by siphoning a sample and isolating the product), the mixt. is dild. with H_2O and worked up as above. Yields are 70-85%, a soln. of NaOH in 60% aq. MeOH can be used. It is stated that $(MeO)(EtO)PSCl_2$ can be made similarly in 85-91% yield.

G. M. Kozolapoff

MANDELY BAUM, Ya. A.

Organic insectofungicides. XVIII. New method of preparation of esters of chloro- and dichloro-thiophosphoric acids. Z. M. Bakanov, Ya. A. Mandelbaum, N. N. Mel'nikov and E. I. Svental'skii (Zh. Obshch. Khim., 1958, 68, 494-495). The reactions: $3PSCl_2 + 2Al(OEt)_3 \rightarrow AlCl_3 + 3OEtPSCl_2$ and $3PSCl_2 + Al(OEt)_3 \rightarrow AlCl_3 + 3OEtPSCl_2$, take place at 60-65° (3-5 hr); the products are obtained in about 40% yield. R. Truscov.

MANDELBAUM, YA. A.

Organic peroxide. XII. Synthesis of mixed esters of bisulfonic
sulfonic acids. I. L. Vladimirova and N. N. Melnikov. XIII. Reactions
of diaryl bisphosphorotriethylates with p-nitrophenol in presence
of pyridine hydrochloride. Z. M. Babanova, Ya. A. Mandelbaum
and N. N. Melnikov. XIV. Preparation of dialkylphosphorotri-
ethylates. N. N. Melnikov, Ya. A. Mandelbaum, V. I. Lomakina and
Z. M. Babanova. XV. New method of preparing halogenophenyl
esters of sulphonic acids. L. G. Vaitson, S. G. Velodkovich. N. N.

9

MANDEL'BAUM, YA. A., MEL'NIKOV, N.N., (NIUIF im. Ya. V. Samoylov, Moscow)

"On the Production of Dialkylchlorothiophosphates" (O poluchenii dialkikhlortiofosfatov)

Chemistry and Uses of Organophosphorus Compounds
(Khimiya i primeneniye fosfororganicheskikh sovedneniy),
Trudy of First Conference, 8-10 December 1955, Kazan,
pp. Published by Kazan At'ill. AS USSR, 1957
185-193,

MANDELBAUM, Ya. A.

Pesticides. H. N. Mel'nikov, Ya. A. Mandelbaum,
M. Bakunova, and P. V. Popov. U.S.S.R. 105,558,
May 25, 1967. To protect plants from insects and mites,
dusts or emulsions made with *O*-methyl *O*-ethyl *O*-4-nitro-
phenyl thiophosphate are used. M. Kisch

MANDEL'BAUM, Ye.A.

MEL'NIKOV, N.N.; MANDEL'BAUM, Ye.A.; SVENTSITSKIY, Ye.I.; BAKANOVA, Z.M.

On organic insectofungicides. Part 27: New method for the preparation of esters of chlorothiophosphoric acid. Zhur.ob.khim. 27 no.7:1908-1910 J1 '57. (MIRA 10:10)

1.Nauchnyy institut po udobreniyam i insektofungisidam.
(Insecticides) (Chlorothiophosphoric acids)

MANDELBAUM, YA. A.

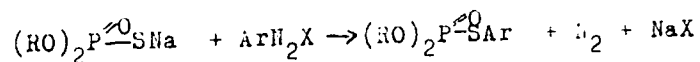
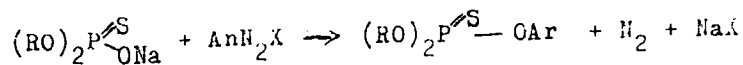
AUTHORS: Mel'nikov, N. M., Mandel'baum, Ya. A.,
Lomakina, V. I.,

79-2- 1/5..

TITLE: Organic Insecticides and Fungicides
(Iz oblasti organicheskikh insektofungitsidov) XXXI. A New Method for the Pro-
duction of Mixed Esters of Thiophosphoric Acid (XXXI. Novyye
sposob polucheniya smeshannykh efirov tiofosfornoj kisloty)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 476-478
(USSR)

ABSTRACT: The reaction between aromatic diazocompounds with salts of the
dialkylthiophosphoric acid was investigated and mixed ethers of
thiophosphoric acid were obtained in acid-aqueous solution with
a yield of up to 50%. Here schematically seen an isomer mixture
of the tautomers is formed:



Card 1/2

In the present paper the equilibrium of the tautomers of the
dialkylthiophosphates is moved to the side of the thioform, in

Organic Insecticides and Fungicides 79-2-41/64
A New Method for the Production of Mixed Esters of Thiophosphoric Acid

accordance with L.I. Kabachnik, S.T. Ioffe and T.A. Mastryukova (reference 4), since O,O-dialkyl-S-aryl-thio phosphates and in only one case thionisomers predominate in the reaction product. The results obtained show that the quantity ratio of the isomers is more influenced by the attacking reagent than by the reaction medium. The working methods as well as tables of the properties of esters are given. There are 1 table, and 4 Slavic references.

ASSOCIATION: Scientific Institute for Fertilizers, Insecticides and Fungicides (Nauchnyy institut po udobreniyam i insektofungitsidam)

SUBMITTED: January 16, 1957

AVAILABLE: Library of Congress

Card 2/2

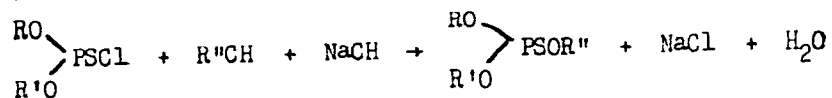
MANDEL'BAUM, YA. A.

AUTHORS: Mandel'baum, Ya, A., Mel'nikov, N. N., Petrova, N. I. 79-2-42/64

TITLE: Organic Insecticides and Fungicides (Iz oblasti organicheskikh insektofungitsidov)
XXXII. The Synthesis of Some Mixed Ethers of Thiophosphoric Acid
(XXXII. Sintez nekotorykh smeshannykh efirov tiofosfornoj kisloty).

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 479-480 (USSR).

ABSTRACT: The reaction between mixed dialkylchlorothiophosphate and methanol, ethanol resp. was investigated in the presence of caustic soda. It is found that the corresponding trialkylthiophosphates are obtained with good yields (70-94%) in the reaction. The reaction can schematically be represented as follows:



The major part of the compounds obtained have hitherto not yet been mentioned in technical literature. The specific properties of the obtained compounds as well as the preparation process are given. There are 1 table, and 3 Slavic references.

Card 1/2

Organic Insecticides and Fungicides

79-2-42/64

ASSOCIATION: Scientific Institute for Fertilizers, Insecticides and Fungicides
(Nauchnyy institut po udobreniyam i insektofungitsidam).

SUBMITTED: January 16, 1957.

AVAILABLE: Library of Congress.

Card 2/2

MEL'NIKOV, N.M.; MANDEL'BAUM, Ya.A.; BAKANOVA, Z.M.

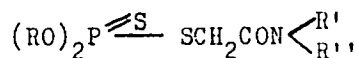
Organic insecti- and fungicides. Part 34: New synthesis of trialkyl-
phosphites. Zhur.ob.khim. 28 no.9:2473-2474 S '58. (MIRA 11:11)
(Phosphites)

AUTHORS: Mandel'baum, Ya. A., Mel'nikov, I. ..., SCV/79-29-1-59/74
Zaks, P. G.

TITLE: On the Field of Organic Insecticides (Iz oblasti organicheskikh insektofungitsidov) XXXVII. Synthesis of Several Mixed Thio- and Dithiophosphoric Acids (XXXVII. Sintez nekotorykh smeshannykh efirov tio- i ditiyosfornykh kislot)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 1, pp 283-285 (USSR)

ABSTRACT: Besides thio- and dithiophosphates of the general formula
 $(RO)_2P \begin{smallmatrix} \nearrow X \\ \searrow \end{smallmatrix} X(CH_2)_n SR'(I)$ used against plant pests, compounds of the general formula



have come into use during the last years (Refs 1, 2). The so-called "acetyl urea" (Refs 3, 4) may serve as an example for the compounds of this kind investigated in the USSR. While investigating how insecticide activity of organo-phosphorus compounds depended on their structure, and in the search for new insecticides, harmless to warm-blooded animals and humans,

Card 1/2

On the Field of Organic Insecticides.

SOV/79-29-1-59/74

XXXVII. Synthesis of Several Mixed Thio- and Dithiophosphoric Acids

the authors particularly directed their efforts towards the synthesis of the mixed esters of thio- and dithiophosphoric acids of the general formulas (III), (IV), and (V). It was carried out by the reaction of diethyl-thio- and diethyl-dithiophosphates with the corresponding monochloro acetic and monochloro thioacetic acid on heating the reaction solution. As expected, the thionic isomers of the thiophosphates were obtained (Refs 5, 6)(Table). Activity against insects did not quite come up to expectations compared to O,O-diethyl-O,4-nitro-phenyl thiophosphate. There are 1 table and 6 references, 4 of which are Soviet.

ASSOCIATION: Nauchnyy institut po udobreniyam i insektfungitsidam
(Scientific Institute for Fertilizers and Insectifungicides)

SUBMITTED: November 20, 1957

Card 2/2

SOV/79-29-2-35/71

AUTHORS: Mel'nikov, N. N., Mandel'baum, Ya. A., Zaks, P. G.

TITLE: On the Field of Organic Insectofungicides (Iz oblasti organicheskikh insektofungitsidov). XXXVIII. On the Reaction of Thiophosphorus Trichloride and the Alkyl Dichloro Thiophosphates With Alcohols (XXXVIII. O vzaimodeystvii tictrekhkhlorigo fosfora i alkildikhlorotiofosfatov so spirtami)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 522-526 (USSR)

ABSTRACT: In continuation of previous papers published by Mel'nikov and coworkers (Refs 1-11) the authors investigated the reaction of thiophosphorus trichloride and the alkyl dichloro thiophosphates with alcohols under various conditions. They obtained various products according to the conditions of reaction and the ratio of the reacting compounds. On the reaction of 2 mols ethyl alcohol with 1 mol thiophosphorus trichloride the ethyl dichloro thiophosphate (45-50%) and ethyl thiophosphoric acids (20%) are obtained at 40-50°. The reaction of 1 mol thiophosphorus trichloride with 4 mols ethyl alcohol at 50-60° leads to a mixture of esters (46-48%) which consists of 80% ethyl dichloro thiophosphate and 20% diethyl-chloro thiophosphate,

Card 1/3

SOV/79--29-2-35/71

On the Field of Organic Insectofungicides. XXXVIII. On the Reaction of Thiophosphorus Trichloride and the Alkyl Dichloro Thiophosphates With Alcohols

however, it is possible to synthesize an almost pure diethylchloro thiophosphate in a yield of only 10% if it is heated for a while in a boiling water bath. Besides chloro thiophosphates also ethyl thiophosphoric acids and ethyl chloride are formed under the above-mentioned conditions. The reactions of thiophosphorus trichloride with alcohols and their succession can be represented by the schemes (3)-(7) mentioned. According to these schemes the authors arrived at the conclusion that good yields of dialkyl chloro thiophosphates can be obtained on sufficient dilution of the reaction medium with alcohol. This assumption was fully confirmed by experiments (Table 1). Much better yields of dialkyl chloro thiophosphates are obtained by reaction of alcohols with alkyl dichloro thiophosphates, in the course of which methyl alcohol offers the highest yield (Table 2). The reaction of methyl alcohol with thiophosphorus trichloride or alkyl dichloro thiophosphate leads to trialkyl thiophosphates, however only with small yields (Table 3). Therefore, thiophosphorus trichloride and alkyl dichloro thiophosphates react like typical chloric anhydrides, similar to acid halides of the other inorganic and

Card 2/3

SOV/79-29-2-35/71

On the Field of Organic Insectofungicides. XXXVIII. On the Reaction of Thio
phosphorus Trichloride and the Alkyl Dichloro Thiophosphates With Alcohols

organic acids. There are 3 tables and 12 references, 9 of which
are Soviet.

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungitsidam
(Scientific Institute of Fertilizers and Insectofungicides)

SUBMITTED: December 24, 1957

Card 3/3

5 (3)

AUTHORS:

Mandel'baum, Ya. A., Mel'nikov, N. N., SOV/79-29-4-25/77
Bakanova, Z. M.

TITLE:

From the Field of Organic Insecticides and Fungicides
(Iz oblasti organicheskikh insektofungitsidov). XLI. On the
Reaction of Dialkyl-chloro-thiophosphates and
Thiophosphorus-trichloride With Phenols in the Presence of
Tertiary Amines (XLI. O vzaimodeystvii dialkikhlorotiofosfatov
i tiotrekhhloristogo fosfora s fenolami v prisutstvii
tretichnykh aminov)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29; Nr 4,
pp 1149-1151 (USSR)

ABSTRACT:

In connection with the papers mentioned in the references
1-5 the authors especially investigated the reactions of
dialkyl-chloro-thiophosphates with phenols in the presence
of tertiary amines. This reaction proceeded already at room
temperature in good yields and produced the corresponding
dialky-aryl-thiophosphates. The solvents were of no
importance, and the reaction proceeded also without solvents,
but in this case the stirring of the reaction mixture is
difficult owing to the crystallization of ammonium chloride.

Card 1/3

From the Field of Organic Insecticides and Fungicides. XLI. On the Reaction of Dialkyl-chloro-thiophosphates and Thiophosphorus-trichloride With Phenols in the Presence of Tertiary Amines

SOV/79-29-4-25/77

Dialkyl-aryl-thiophosphates are obtained in good yield also in alcoholic solution, which indicates that the reaction with phenols proceeds more rapidly than with alcohols. The authors investigated the reaction of dialkyl-chloro-thiophosphates with phenols in the presence of triethyl amine. O,C-dialkyl-O-aryl thiophosphates were found to result. The mechanism of the formation of dialkyl-aryl-thiophosphates from dialkyl-chloro-thiophosphates and phenols in the presence of tertiary amines can be best explained in the following way: There is an exchange reaction between amine phenolate and dialkyl-chloro-thiophosphate, yielding the hydrogen chloride of the amine and of dialkyl-aryl-thiophosphate. On the reaction of phenols with thiophosphorus trichloride in the presence of triethylamine aryl-dichloro-thiophosphates were obtained in sufficient yield. There are 1 table and 5 references, 4 of which are Soviet.

Card 2/3

From the Field of Organic Insecticides and Fungicides. XLI. On the Reaction of Dialkyl-chloro-thiophosphates and Thiophosphorus-trichloride With Phenols in the Presence of Tertiary Amines

30V/79-29-4-25/77

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungitsidam
(Scientific Institute of Fertilizers, Insecticides and Fungicides)

SUBMITTED: March 12, 1958

Card 3/3

MANDEL'BAUM, Ya.A.; LOMAKINA, V.I.

Investigation and development of new preparations repelling
bloodsucking insects. [Trudy] NIUIF no.164: '59.
(MIRA 15:5)
(Insect baits and repellents)

MEL'NIKOV, N.N.; MANDEL'BAUM, Ya.A.; SHVETSOVA, K.D.; BAKANOVA, Z.M.
LOMAKINA, V.I.; ZAKS, F.G.; MIL'SHTEYN, I.M.; POPOV, P.V.;
POKROVSKIY, Ye.A.; BOCHAROVA, L.P.; SEDYKH, A.S.; UKRAINETZ, N.S.

Improved technology for producing thiophos, metaphos, chlorophos
and other phosphorus organic insecticides and investigation of
new insecticides and fungicides derived from the esters of
phosphoric acids. [Trudy] NIUIF no.164:11-14 '59. (MIRA 15:5)
(Insecticides) (Fungicides)

MAIDEL'BAUM, Ya.A., kand.khimicheskikh nauk; SAP'YANOVA, V.M., kand.
meditsinskikh nauk; LOMAKINA, V.I.

Chemical insect repellents. Zhur. VIKO 5 no. 3:307-312 '60.
(MIRA 14:2)
(Insect baits and repellents)

MANDEL'BAUM, Ya.; SAF'YANOVA, V.M.

Diethylamide of metatoluic acid, and effective repellent
against blood-sucking insects and ticks. Med.paraz.i paras.
bol. 29 no.5:570-575 S-O '60. (MIRA 13:12)

1. Iz laboratorii organicheskikh insektofungitsidov Nauchno-
issledovatel'skogo instituta udobreniy i insektofungitsidov
(dir. instituta - prof. K.N. Malin, zav. laboratoriy - prof.
N.N. Mel'nikov) i otdela infektsiy s prirodnoy ochagovost'yu
Instituta epidemiologii i mikrobiologii imeni N.F. Gamalei
AMN SSSR (dir. instituta - prof. S.N. Muromtsev, zav. otdelcom -
prof. P.A.Petrishcheva).

(INSECT BAITs AND REPELLENTS) (TOLUAMIDE)

5.1320,5.3630

77380

SOV/79-30-1-41/78

AUTHORS: Mandel'baum, Ya. A., Mel'nikov, N. N., Bakanova, Z. M.

TITLE: Concerning Organic Pesticides. LII. Concerning the Reaction of Aryl-Dichlorothiophosphates With Magnesium Ethoxide

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 1, pp 194-197 (USSR)

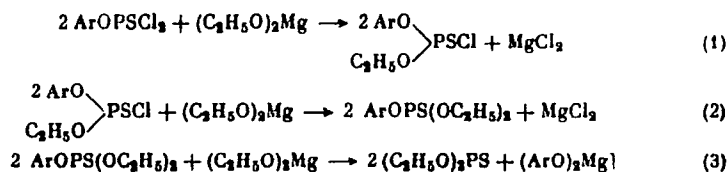
ABSTRACT: The reaction of aryl dichlorothiophosphates with magnesium ethoxide was investigated with the purpose of obtaining some new pesticides, and also in order to study the relationship between the reactivity and the structure of the chlorothiophosphoric acid derivatives. The reaction can proceed according to (1), (2), and (3), depending on the ratio of the reagents, the temperature of the reaction, and the time of reaction.

Card 1/4

Concerning Organic Pesticides. LII.
 Concerning the Reaction of Aryl-
 Dichlorothiophosphates With Magnesium
 Ethoxide

77380

SOV/79-30-1-41/78



Aryl dichlorothiophosphates and magnesium ethoxide taken in stoichiometric amounts gave chiefly alkyl aryl chlorothiophosphates or the corresponding diethyl aryl thiophosphates. Transesterification (Formula 3) occurred only with large excess of magnesium ethoxide and on prolonged heating. Accordingly, 0.1 mole phenyl dichlorothiophosphate and 0.05 mole magnesium ethoxide on heating for 3.5 hr gave O-ethyl O-phenyl chlorothiophosphate (yield 64%; bp 95-100° C/0.2 mm). The same reagents taken in amounts of 0.05 mole and 0.1 mole, respectively, gave on heating for 7 to 17 hr O,O-diethyl O-phenyl thiophosphate (yield 82-91%; bp 120-122° C/0.8 mm). 0.1 Mole 2,4,5-trichlorophenyl

Card 2/4

Concerning Organic Pesticides. LII.
Concerning the Reaction of Aryl-
Dichlorothiophosphates With Magnesium
Ethoxide

77380
SOV/79-30-1-41/78

dichlorothiophosphate and 0.3 mole magnesium ethoxide on heating at 65-70° C for 18 hr gave 0,0-diethyl 0-2,4,5-trichlorophenyl thiophosphate (yield 78%; bp 130° C/0.13 mm); also, 2,4,5-trichlorophenol (yield 13%; mp 62° C), and triethyl phosphate (yield 15%). Under similar conditions, 0.1 mole 4-nitrophenyl dichlorothiophosphate and 0.3 mole magnesium ethoxide gave 0,0-diethyl-0,4-nitrophenyl thiophosphate (yield 40%; bp 156-158° C/0.3 mm); also, p-nitrophenol (yield 28%; mp 112° C), and 0,0,0-triethyl thiophosphate (yield 30%; bp 51-52° C/0.3 mm). There are 10 references, 2 U.S., 1 U.K., 7 Soviet. The U.S. and U.K. references are: H. D. Orloff, C. J. Worrel, F. X. Markley, J. Am. Chem. Soc., 80, 727 (1958); R. F. Hudson, L. Keoy, J. Chem. Soc., 1953, 2463; T. R. Fukuto, R. L. Metcalf, J. Agr. Food Chem., 4, 930 (1956).

Card 3/4

Concerning Organic Pesticides. LII.
Concerning the Reaction of Aryl-
Dichlorothiophosphates With Magnesium
Ethoxide

77380
SOV/79-30-1-41/78

ASSOCIATION: Scientific Institute for Fertilizers and Pesticides
(Nauchnyy institut po udobreniyam i insektofungitsidam)

SUBMITTED: January 5, 1959

Card 4/4

ZEN'KEVICH, A.G.; ZAKS, P.G.; MANDEL'BAUM, Ya.A.; MEL'NIKOV, N.N.

Organic insectofungicides. Part 55: Synthesis of some
alkylarylthiophosphoric acid hydrazides. Zhur.ob.khim.
30 no.7:2317-2319 J1 '60. (MIRA 13:7)

1. Nauchnyy institut po udobreniyam i insektofungitsidam, Moscow.
(Hydrazides) (Phosphorothioic acid)

ROSLAVTSEVA, S.A.; MANDEL'BAUM, Ya.A.; POPOV, P.V.

New insecticides acting on contact. Khim. prom. no.10:14-15 0 '61.
(MIRA 15:2)

(Insecticides)

MANDEL'BAUM, Ya.A.; KHCHEYAN, Kh.Ye.

Diethylamide of the metatoluic acid (DETA preparation), and effective repellent. Khim. prcm. no.10:22-26 0 '61. (MIRA 15:2)
(Insecticides)

MEL'NIKOV, N.N.; MANDEL'BAUM, Ya.A.; LOMAKINA, V.I.

Organic insectofungicides. Part 58: Synthesis of certain derivatives of dialkoxyposphonopropionic, butyric, and toluic acids.
Zhur. ob. khim. 31 no.3:849-852 Mr '61. (MIRA 14:3)

1. Nauchnyy institut po udobreniyam i insektofungisidam imeni
Ya. V. Samoylova.
(Propionic acid) (Butyric acid)(Toluic acid)

MEL'NIKOV, N.N.; MANDEL'BAUM, Ya.A.; LOMAKINA, V.I.; LIVSHITS, V.S.

Organic insecticide-fungicides. Zhur.ob.khim. 31 no.12:3949-
3953 D '61. (MIRA 15:2)

1. Nauchnyy institut po udobreniyam i insektofungitsidam
im. Ya.V. Samoylova (NIUIF), Moskva.

(Insecticides)

(Acetic acid)

(Phosphorus organic compounds)