MNATSAKANOVA, M., inzhener.

Equipment for prestressing of reinforcements. Stroitel' 2 no.11:14 N'56.
(Prestressed concrete) (MLRA 10:1)

GEDALIN, E.V.; MIASNIKOVA, M.N.

Fluctuations in electron-photon showers generated by high-energy π^0-mesons. Fiz. chast. vys. energ. no.1:51-64 '65. (MIRA 18:12)

NAGORNAYA, [illegible]; MNATSAKANOVA, T.R.; GREKOV, A.P.; SHVAYKA, [illegible]

Photoluminescence and scintillation properties of certain 1,3,4-oxadiazole derivatives. Opt. i spektr. 18 no.3:404-406 Mr '65. (MIRA 18:5)

SHVAYKA, O. P.; MNATSAKANOVA, T. R.

Oxadiazole derivatives. Part 1: Synthesis and properties of bromalkylaryl-, styrylaryl-, and diaryl derivatives of 1,3,4 -oxadiazole. Zhur. ob. Khim. 34 no.6:2061-2065 Je '64. (MIRA 17:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut monokristallov, stsintillyatsionnykh materialov i osobo chistykh khimicheskikh veshchestv.

L 20349-66 EWT(m) RM

ACC NR: AP6012081 SOURCE CODE: UR/0062/65/000/003/0502/0509

AUTHOR: Yunusov, S. Yu.; Mnatsakanya, V. A.; Akramov, S. T. 31 B

ORG: Institute of Plant Compound Chemistry, AN UzbekSSR (Institut khimii rastitel'nykh veshchestu)

TITLE: Investigation of alkaloids of certain species of Papaver N. Roemeria and the structure of fugapavine

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 3, 1965, 502-509

TOPIC TAGS: alkaloid, isomer, plant chemistry, drug

ABSTRACT: Papaver commutatum Fisch. et Mey contains papaverine. Armepavine, floripavine, and two new alkaloids: d-isoremerine and fugapavine, which is 3-oxo-5, 6-methylenedioxyaporphine, have been isolated from Papaver fugax Poir. The existence of l- and d- remerine and l- and d-isoremerine is accounted for by the isomerism associated with spatial configuration of the dihydrophenanthrene skeleton, the nitrogen-containing ring, and the asymmetry of the $>N-CH_3$-group. The second base isolated from the nonphenol portion of the total alkaloids of P. fugax has a melting point of 178.5-179.5°, $[\alpha]_D$ -116°, composition $C_{18}H_{17}NO_3$. The base contains tertiary nitrogen, and a methylimide and methylene dioxy-groups. From composition and physical chemical constants, this base is not reduced to one of the alkaloids known and described in the literature. The authors named it

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UDC: 547.94

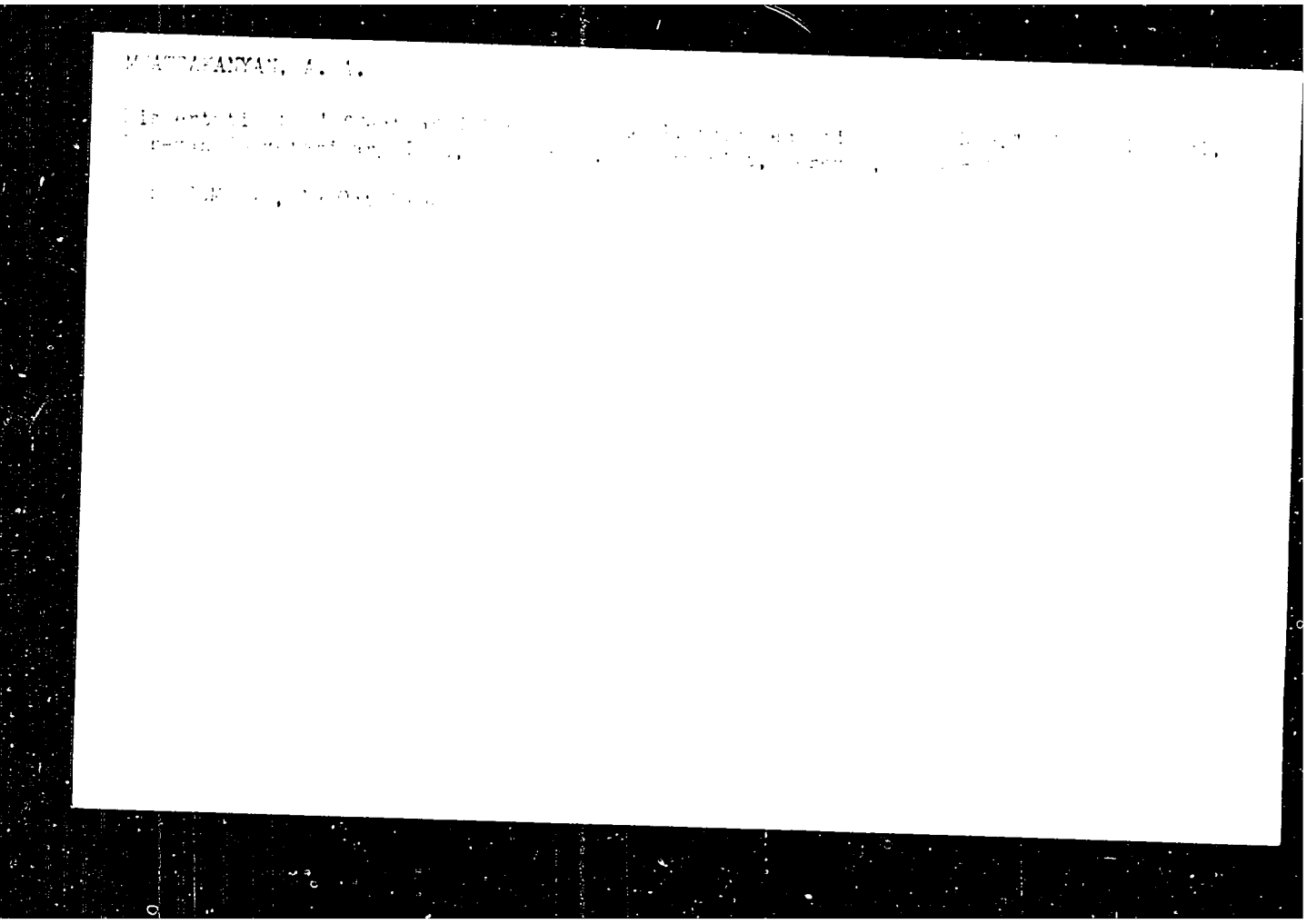
L 20349-66

ACC NR: AP6012081

fugapavine (II), and its expanded formula can be represented as follows: $C_{15}H_{12}(>N-CH_3)(CO)(O_2CH_2)$ (II). Orig. art. has: 1 figure and 1 table. [JPRS]

SUB CODE: 07, 06 / SUBM DATE: 18Mar63 / ORIG REF: 007 / OTH REF: 005

Card 2/2 vmb



KAMALYAN, G.V.; VOSKANAYAN, V.B.; BADALOVA, L.L.; MELIKYAN, A.O.; MNATSAKANYAN, A.A.

Materials on a zootechnical, physiological, and biochemical study of the constituttion of young cattle of local breeds and their crosses with the Schwyz Cattle. Izv.AN Arm.SSR.Biol.i sel'khoz. nauki. 9 no.4:3-16 Ap '56. (MLRA 9:8)

1. Yerevanskiy zooveterinarnyy institut.
(Armenia--Cattle)

USSR / General Problems of Pathology. Immunity.

Abs Jour : Ref. Zhur. - Biologiya, No. 3, 1959 13432

Author : Kamalyan, G. V.; Mnatsakanyan, A. A.; Konstanyan, A. A.

Inst : Academy of Sciences Armenian SSR

Title : The Influence of Certain Biogenic Amines on th Displacements of Protein Fractions of Blood and the Stimulation of Agglutinins Formation. Report I. The Influence of Colamine and Acetylcholine on the Stimulation of Agglutinin Formation and Displacements of Protein Fractions of the Blood of Rabbits by Vaccination with Paratyphoid Vaccine.

Orig Pub : Dokl. AN ArmSSR, 1957, 25, No. 2, 69-73

Abstract : The immunization of rabbits was conducted wit

Card 1/2

KAMALYAN, G.V.; MKRTSAKANYAN, A.A.; KOSTANYAN, A.A.

Effect of some biogenic amines on shifts in the blood protein fractions and their stimulating influence on agglutinin formation. Izv.AN Arm.SSR.Biol. i sel'khoz.nauki 11 no.11: 47-54 N '58. (MIRA 11:12)

1. Yerevanskiy zooveterinarnyy institut.
(VACCINATION) (ETHANOL)

KAMALYAN, G.V.; ABRAMYAN, S.G.; MKRTSARYAN, A.A.

Investigating the aminoacid composition of the proteins of blood serum atrophic rhinitis of swine. Izv. AN Arm. SSR. Biol. nauki 15 no.1:53-57 Ja '62. (MIRA 15:2

1. Laboratoriya obmena veshchestv Zooveterinarnogo instituta.
(BLOOD PROTEINS) (SWINE--DISEASES AND PESTS)

MNATSAKANYAN, A.A.

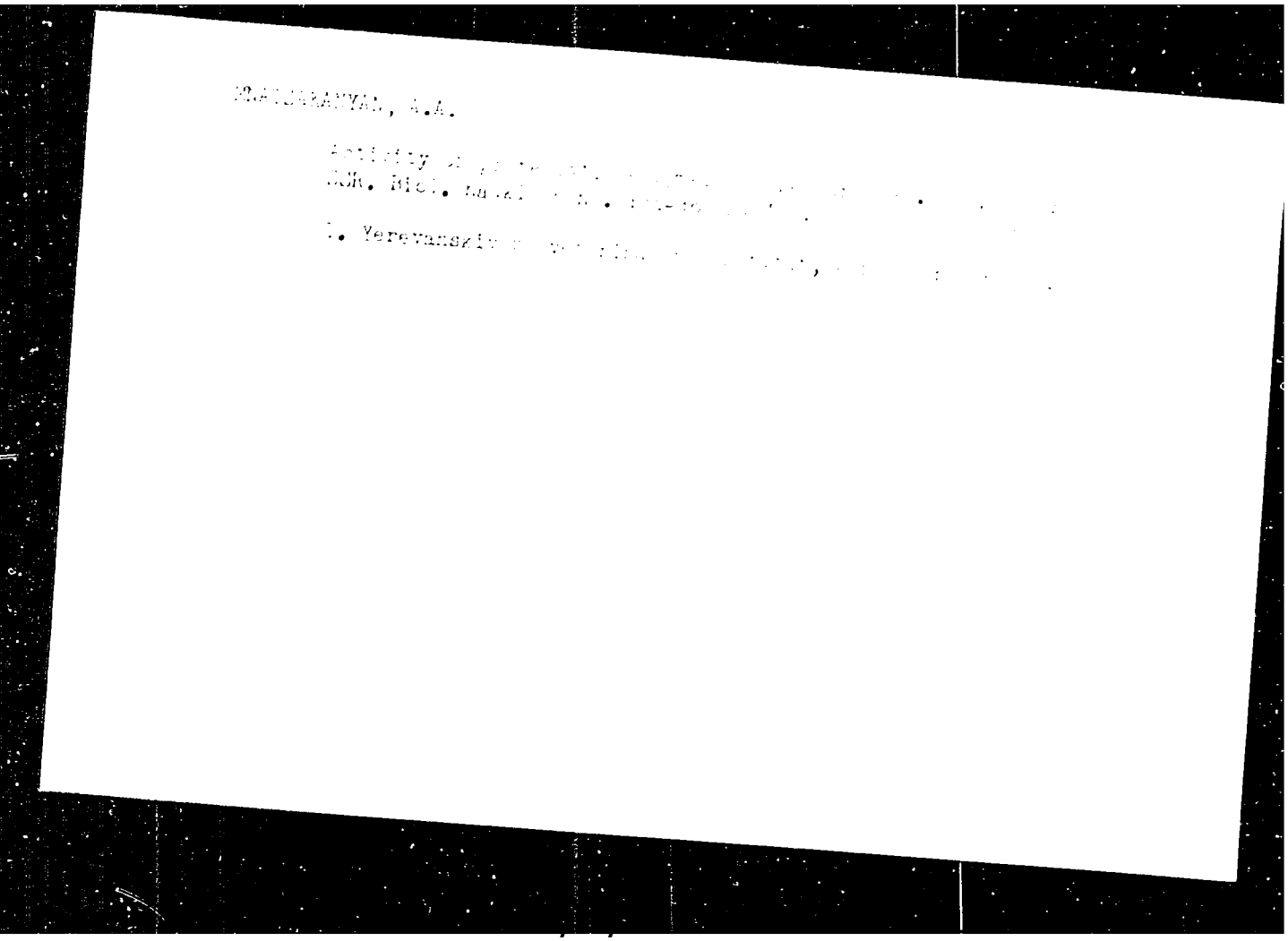
Effect of the amino alcohols of diethanolamine, choline and dimethylethanolamine on the secretion and chemistry of bile. Izv. AN Arm. SSR. Biol. nauki 16 no.7:35-40 Jl '63.
(MIRA 17:12)

1. Kafedra biokhimii Yerevanskogo zooveterinarnogo instituta.

KAMALYAN, G.V.; MKHATSAKANYAN, A.A.; OGANESYAN, M.A.

Effect of some biogenic amino alcohols on changes in the blood protein fractions and the stimulation of agglutinin formation. Zhur. eksp. i klin. med. 3 no.6: 9-17 '63 (MIRA 17:4)

1. Yerevanskiy zooveterinarnyy institut.



MAKAROV, N.I.; SKLYAROV, V.Ya.; ALIKPEROVA, Sh.M.; NADZHAROV, A.F.; DZEBISASHVILI, Yu.I.; MKRTSAKANYAN, A.G.; ODINOCHENKO, G.N.; AZUGAROVA, M.Kh.; ZYUZIN, A.S.

Morbidity from anthrax in animals and humans in Ciscaucasia and Transcaucasis in 1960-1961: authors' abstract. Zhur. mikrobiol. epid. i immun. 40 no.5:112-113 My '63. (MIRA 17:6)

1. Iz Nauchno-issledovatel'skogo protivochumnogo instituta Kavkaza i Zakavkazya, Azerbaydzhanskoy, Armyanskoy, Gruzinskoy, Severo-Osetinskoy, Checheno-Ingushskoy respublikanskikh sanitarno-epidemiologicheskikh stantsiy i Azerbaydzhanskoy protivochumnoy stantsii.

L 18375-65 EWT(1)/T/EWA(b) Pa-4 AMD JK
ACCESSION NR: AP5003101 S/0016/64/000/011/0141/0142

AUTHOR: Zil'fyan, V. N.; Mnatsakanyan, A.G.

TITLE: Geographical distribution and certain peculiarities of natural Tularemia foci in the Armenian SSR

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 11, 1964, 141-142

TOPIC TAGS: disease incidence, bacterial disease, immunology

Abstract: Tularemia infection has been discovered in 20 rayons of the Armenian Republic, in mountain-steppe, forest and mountain-meadow zones. Human infection occurs primarily during butchering of tick infested sheep, from drinking water contaminated with the tularemia pathogen, and through the sucking of Ixodes ticks. The comparatively low rate of human infection is because there is no water rodent trapping and no mosquito transmission in the floodland-marsh foci of the mountain-steppe zone. Ixodes ticks are the only vector; they are not numerous and rarely attack humans. Water transmission is largely prevented because of the predominant use of spring water for drinking. In the past 5 years a half million persons (50% of the farm population) have been vaccinated. The authors conclude that the number of persons subjected to vaccination should be sharply reduced.

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L 18375-65
ACCESSION NR: AP5003101

2

ASSOCIATION: Yerevanskiy meditsinskiy institut (Yerevan Medical Institute); Respublikanskaya sanitarno-epidemiologicheskaya stantsiya (Republic Sanitary-Epidemiological Institute)

SUBMITTED: 20Jul63 ENCL: 00 SUB CODE: LS

NO REF SOV: 000 OTHER: 000 JPRS

Card 2/2

MKRTCHAKANYAN, A.G.

Distribution of brucellosis in the Armenian S.S.R. and measures of its control. Zhur. mikrobiol., epid. i immun. 41 no. 2:143 F '64. (MIRA 17:9)

1. Respublikanskaya sanitarno-epidemiologicheskaya stantsiya Armyanskoy SSR, Yerevan.

MNATSAKANYAN, A.G.

Epidemiology and prophylaxis of bru cellosis in the Armenian S.S.R. Zhur.eksp. i klin.med. 4 no.3:79-85 '64.

(MIRA 18:1)

1. Armyanskaya respublikanskaya sanitarno-epidemiologicheskaya stantsiya.

KUZINA, A.N.; MALETINA, M.V.; ADOMONITE, G.M.; GRISHINA, O.S.; GRANT, Kh.Ya. [Grants, H.]; KOVALEVA, V.I.; ZIL'FYAN, V.N.; MNATSAKANYAN, A.G.; BOYKO, L.D.; SVERCHKOV, A.N.

Authors' abstracts. Zhur. mikrobiol., epid. i immun. 41 no.11:138-143 '65. (MIRA 18:5)

1. Irkutskiy institut epidemiologii i mikrobiologii (for Kuzina, Maletina). 2. Gosudarstvennyy kontrol'nyy institut meditsinskikh biologicheskikh preparatov imeni Tarasevicha (for Adomonite; ...). 3. L'vovskiy institut epidemiologii, mikrobiologii i gigiyeny (for Grishina). 4. Rizhskiy meditsinskiy institut (for Grant). 5. Dagestanskiy institut po proizvodstvu pitatel'nykh sred (for Kovaleva). 6. Yerevanskiy meditsinskiy institut i Respublikanskaya sanitarno-epidemiologicheskaya stantsiya (for Zil'fyan, Mnatsakanyan). 7. Kiyevskiy institut epidemiologii i mikrobiologii (for Boyko, Sverchkov).

L 22891-65 EWT(1)/T IJP(c)

ACCESSION NR: AP5003042 S/0051/65/018/001/0161/0164

AUTHOR: Mnatsakanyan, A. Kh.

TITLE: Excitation of oscillations of diatomic molecules in the impulse approximation

SOURCE: Optika i spektroskopiya, v. 18, no. 1, 1965, 161-164

TOPIC TAGS: excitation probability, diatomic molecule, impulse approximation, particle collision, atomic collision, excitation threshold

ABSTRACT: The author analyzes the one-dimensional collision between an atom with mass m_1 and a molecule made up of atoms with masses m_2 and m_3. It is shown that at high energies of relative motion (much above the excitation threshold), it is possible to derive the Fermi formula $P_{if} = |a_{if}(2k_i)|^2$ (a -- matrix element, k -- wave number) for the excitation probability by using the impulse approximation, without making any additional assumptions. "The author thanks L. M. Biberman, L. I. Podlubnyy, and A. N. Starostin for interest in the work and for valuable discussions." Orig. art. has: 1 figure and 13 formulas.

Card 1/2

L 22891-65

ACCESSION NR: AP5003042

0

ASSOCIATION: None

SUBMITTED: 03Mar64 ENCL: 00 SUB CODE: NP

NR REF SOV: 003 OTHER: 002

Card 2/2

MNATSAKANYAN, A.Kh.

Some features of the upper Cretaceous volcanism of northern Armenia. Izv. AN Arm. SSR. Geol. i geog. nauki 14 no.3:25-36 '61. (MIRA 14:8)

1. Institut geologicheskikh nauk AN Armyanskoy SSR.
(Armenia--Volcanoes)

BAGDASARYAN, G.P.; GUKASYAN, R.Kh.; MNATSAKANYAN, A.Kh.

Recent data on the geochronological scale of absolute chronology according to the materials of the Armenian S.S.R. Dokl. AN Arm. SSR 33 no.4:181-185 '61 (MIRA 15:1)

1. Institut geologicheskikh nauk AN Armyanskoy SSR. Predstavleno akademikom AN Armyanskoy SSR K.N.Paffengol'tsem
(Geological time)

ABOVYAN, S.B.; BAGDASARYAN, G.P.; KAZARYAN, G.A.; KARAPETYAN, K.I.; MALKHASYAN, E.G.; MELIKSETYAN, B.M.; MNATSAKANYAN, A.Kh.; CHIBUKHCHYAN, Z.O.; SHIRINYAN, K.G.; MELKONYAN, R.L., otv. red.; CHAKHALYAN, TS., tekhn. red.; NUNYAN, S., tekhn. red.

[Chemical composition of igneous and metamorphic rocks in the Armenian S.S.R.] Khimicheskie sostavy izverzhennykh i metamorficheskikh gornykh porod Armianskoi SSR. [By] S.B. Abovian i dr. Erevan, Izd-vo Akad. nauk Armianskoi SSR, 1962. 433 p. (MIRA 16:2)

1. Akademiya nauk Armyanskoy SSR, Erivan. Institut geologicheskikh nauk.

(Armenia--Rocks, Igneous--Analysis)
(Armenia--Rocks, Crystalline and metamorphic--Analysis)

DZHRBASHYAN, R.T.; MALKHASYAN, E.G.; MNATSAKANYAN, A.Kh.

Characteristics of the distribution of trace elements in paleovolcanic formations of the Armenian S.S.R. Izv.AN Arm. SSR. Geol.i geog.nauki 16 no.3:15-28 '63. (MIRA 17:2)

1. Institut geologicheskikh nauk AN Armyanskoy SSR.

MNATSAKANYAN, A.Kh.

Excitation of vibrations of diatomic [illegible] approxi-
mation. Opt. i spektr. [illegible] no.1:1[illegible] Ja '[illegible].

([illegible] 18:..)

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134820005-7"

MNATSAKANYAN, A.Kh.

Zeolitization of upper volcanic rocks in [illegible] the Armenian S.S.R. Izv. AN Arm. SSR. Ser. nauk o zem. 18 no. 3, 39-42 '65.

(MIRA 18:5)

1. Institut geologicheskikh nauk AN Armyanskoy S.S.R.

L 3966-66 EWT(1)

ACCESSION NR: AP5025291

UR/0051/65/019/004/0487/0489
539.192

AUTHOR: Biberman, L. M.; Mnatsakanyan, A. Kh.; Starostin, A. N.

TITLE: The connection between the probabilities of radiation processes of the second order perturbation theory

SOURCE: Optika i spektroskopiya, v. 19, no. 4, 1965, 487-489

TOPIC TAGS: perturbation theory, Raman scattering, two photon absorption, Einstein coefficient, spontaneous emission, quantum electrodynamics

ABSTRACT: An attempt is made to relate spontaneous and stimulated Stokes and anti-Stokes Raman scattering processes to spontaneous and stimulated two-photon absorption and emission. The probabilities of these second-order processes in nonrelativistic approximation are determined by universal amplitudes defined in the plane of two frequencies. Knowledge of the amplitude of any one of the processes as an analytical function of the frequency makes it possible, at least in principle, to unequally determine the amplitudes of the other processes, using the reversibility and the cross-symmetry principles. This makes it possible to obtain a relationship between these processes under certain simplifying conditions. The authors show that in the dipole

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L 3966-66

ACCESSION NR: AP5025291

approximation unique relationships exist between the universal amplitudes of the emission and the anti-Stokes Raman scattering processes (one is equal to the negative of the other). Using the formulas given and the relationship between the Einstein coefficients it is possible to establish a connection between any pair of the two groups of processes. Orig. art. has: 8 formulas and 1 figure. [CS]

ASSOCIATION: none

SUBMITTED: 08Sep64 ENCL: 00 SUB CODE: OP

NO REF SOV: 003 OTHER: 001 ATD PRESS: 4118

PC

Card 2/2

L 30347-66 EWT(l)/FCC/T IJP(c) GW

ACC NR: AP6014059 (N) SOURCE CODE: UR/0294/66/004/002/0148/0159

AUTHOR: Biberman, L. M.; Mnatsakanyan, A. Kh.

ORG: Moscow Power Engineering Institute (Moskovskiy energeticheskiy institut)

TITLE: Optical properties of air in the temperature interval 4000--10,000K

SOURCE: Teplofizika vysokikh temperatur, v. 4, no. 2, 1966, 148-159

TOPIC TAGS: air, optic property, light absorption, temperature dependence, black body radiation, optic transition, electron transition, bremsstrahlung, recombination radiation

ABSTRACT: This is a continuation of earlier work by one of the authors (Biberman et al., Kosmicheskiye issledovaniya v. 2, 441, 1964; Astron. Acta v. 10, 238, 1964) on the optical properties of air at temperatures up to 20,000K. The present article presents additional data on the degree of blackness at temperatures and pressures for which a decisive role is played by electronic transitions in molecules. These data are obtained by calculating the cross sections for various absorption processes connected with various electronic transitions in the diatomic molecules contained in air. The transitions include the Schuman-Runge system for O_2, the β system for NO, the γ system for NO, the first and second positive systems for N_2, the first negative system for N_2^+, the δ and ϵ systems for NO, the Meinel system for N_2^+, the NO bands in the red, near infrared, and vacuum ultraviolet, and the Birdge-Hopefield systems of N_2. Tables of the absorption cross sections for some of these bands are presented.

Card 1/2

UDC: 533.915.546.217.535.343.4

L 06559-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(c) AT/JD
ACC NR: AP6029772 SOURCE CODE: UR/0294/66/004/004/0491/0493

AUTHOR: Biberman, L. M.; Mnatsakanyan, A. Kh.

ORG: Scientific Research Institute of High Temperatures

TITLE: Energy exchange between electron and molecular gases

SOURCE: Teplofizika vysokikh temperatur, v. 4, no. 4, 1966, 491-493

TOPIC TAGS: electron gas, electron temperature, Maxwell distribution, Boltzmann distribution, plasma physics

ABSTRACT: The authors consider inelastic collisions between electrons and diatomic molecules in a plasma. Maxwell distribution with temperature T_e is assumed for electron velocity while Boltzmann distribution with temperature T is assumed for the discrete levels of the molecules. This gives

$$dE/dt = n_e \sum_{n=0}^{\infty} N_n \sum_{m=0}^{\infty} (E_n - E_m) P_{nm}(T_e),$$

$$P_{nm}(T_e) = \left(\frac{8kT_e}{\pi m}\right)^{1/2} \frac{1}{(kT_e)^2} \int_0^{\infty} \varepsilon e^{-\varepsilon/kT_e} \sigma_{nm}(\varepsilon) d\varepsilon,$$

for the velocity of energy exchange in a unit of volume due to inelastic processes, where n_e is electron concentration; $N_n \approx e^{-E_n/kT}$ is the number of molecules on discrete level n with energy E_n; σ_{nm} is the cross section of inelastic collision with an

Card 1/2

UDC: 533.922

L 06559-67
ACC NR: AP6029772

electron which transfers a molecule from level n to level m. Collisions with a change in rotational energy are considered and the simple formula

$$(dE/dt)_{rot} = 4B \left(\frac{8kT_e}{\pi m_e}\right)^{1/2} \frac{8q}{15} \pi a_0^2 \frac{T - T_e}{T_e}$$

is derived where B is the rotational constant, q is the quadrupole moment of a molecule in atomic units ea_0^2 equal to ~1 a. u. for N_2. This formula agrees satisfactorily with experimental data. Collisions with a change in vibrational energy are discussed and it is shown that the contribution of inelastic processes to the rate of energy exchange in a nonequilibrium plasma may be considerably greater than that of elastic scattering. In the case of the diatomic nitrogen molecule, the rate of energy exchange as a function of the difference between electron and vibrational temperatures is nonmonotonic due to the resonance nature of collisions with a change in vibrational energy. In other words there are regions for the values of T_e and T where the rate of energy transfer passes through a maximum with a reduction in temperature difference. A similar less pronounced relationship also takes place for elastic scattering. In conclusion the authors thank I. Yakubov and V. Dubner for useful discussions and A. Chikankova for assistant with the numerical calculations. Orig. art. has: 1 figure, 3 formulas.

SUB CODE: 20/ SUBM DATE: 14Jul65/ ORIG REF: 001/ OTH REF: 007

MNATSAKANYAN, A.V., kand.med.nauk

Experimental materials on establishing the maximum permissible concentration of chloroprene in the air. Pred. dop. kontsent. atmosf. zagr. no.5:110-117 '61. (MIRA 15:3)

1. Iz laboratorii kommunal'noy gigiyeny Instituta epidemiologii i gigiyeny Ministerstva zdravookhraneniya Armyanskoy SSR.
(AIR--POLLUTION)
(CHLOROPRENE--TOXICOLOGY)

MNATSAKANYAN, A.V., kand.med.nauk

New experimental materials on the substantiation of the average daily maximal permissible concentration of chloroprene in the air. Pred.dop.kon sent.atmosf.zagr. no.8:89-118 '64.

(MIRA 18:4)

1. Iz Instituta epidemiologii i gigiyeny imeni Akopyana Ministerstva z ravookhraneniya Armyanskoy SSR.

L 23645-65

ACCESSION NR: AP5005375 S/0298/64/017/009/0051/0058

AUTHOR: Movsesyan, T. B.; Mnatsakanyan, A. V.; Galstyan, O. Kh.

TITLE: Pathomorphology of brain elements of white rats after chloroprene poisoning

SOURCE: AN ArmSSR. Izvestiya. Biologicheskiye nauki, v. 17, no. 9, 1964, 51-58

TOPIC TAGS: neurology, cytology

ABSTRACT: Chronic poisoning (over a period of 6 months) of white rats with low concentrations of chloroprene (0.56 mg/m^3 and 3.08 mg/m^3) resulted in severe degenerative changes in the cortex and various subcortical formations), no significant differences being noted between the two concentrations.

The degenerative changes included: (1) atrophy and wrinkling of some cells; (2) swelling, tigrolysis, and hypochromasia of others; (3) marked swelling and hydrops, i.e., vacuolation, liquefaction, and lysis of cytoplasm in still other cells. The latter changes were particularly

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L 23645-65
ACCESSION NR: AP5005375

marked in the subcortex and medulla oblongata. Changes in the circulatory system consisted of hypotonia of the vascular wall and proliferation of endothelium.

All these changes are a morphological expression of the functional changes that have already been noted in higher nervous activity following chronic chloroprene poisoning.
Orig. art. has: 7 figures.

ASSOCIATION: Yerevanskiy zooveterinarnyy institut(Yerevan Institute of Veterinary Medicine); Institut epidemiologii i gigiyeny im. N. B. Akopyana Minzdrava ArmSSR (Institute of Epidemiology and Hygiene, ArmSSR)

SUBMITTED: 15Apr63 ENCL: 00 SUB CODE: LS
NO REF SOV: 015 OTHER: 000 JPRS

Card 2/2

L 3168-66 EWT(m)/EPF(c)/EWP(j) RM

ACCESSION NR: AP5017989 UR/0240/64/000/009/0013/0018

AUTHOR: Mnatsakanyan, A. V. (Candidate of medical sciences)

TITLE: Materials for establishing the maximum permissible concentration of chloroprene in the air

SOURCE: Gigiyena i sanitariya, no. 9, 1964, 13-18

TOPIC TAGS: experiment animal, brain, endocrinology, air pollution, chlorinated organic compound

Abstract: The content of sulfhydryl groups in brain and liver homogenates and the adenosine triphosphate activity of the liver were studied in two groups of rats. One group was killed after receiving 0.48 ± 0.02, 0.22 ± 0.009 and 0.888 ± 0.004 mg/m3 for 60 days and nights. The other group was killed 15 days after completion of the same program of chloroprine dosage. The threshold concentration of chloroprene in both groups was 0.22 mg/m3. The effect on the sulfhydryl groups in brain homogenates was a 10% (approximately) decrease in content, while adenosine triphosphate activity was increased approximately 30%. These chloroprene concentrations produced no statistically significant shifts in sulfhydryl group content in liver homogenates. The investigations justify the USSR standard for maximum permissible concentrations of chloroprene in the air of the atmosphere: a daily average value of 0.08 mg/m3. Orig. art. has 2 graphs and 2 tables.

Card 1/2

L 3168-66

ACCESSION NR: AP5017989

ASSOCIATION: Institut epidemiologii i gigiyeny im.N. B. Akopyana Ministerstva zdravookhraneniya Armyanskoy SSR, Yerevan (Institute of Epidemiology and Hygiene, Ministry of Health, Armenian SSR)

SUBMITTED: 20May63 ENCL: 00 SUB CODE: LS, OC

NO REF SOV: 004 OTHER: 000 JPRS

Card 2/2

L 7847-66 EWT(1)/EPA(s)-2/EWT(m)/EWP(t)/EWP(b) IJP(c) JD/GG

ACC NR: AP 5028100 SOURCE CODE: UR/0048/65/029/011/1974/1981

AUTHOR: Shuvalov, L.A.; Mnatsakanyan, A.V.

ORG: Institute of Crystallography, Academy of Sciences, SSSR (Institut kristallografii Akademii nauk SSSR); Yerevan Polytechnic Institute (Yerevanskiy politekhnicheskiy institut)

TITLE: Investigation of the internal friction anomaly of ferroelectric phosphates in the vicinity of the Curie point [Report, Fourth All-Union Conference on Ferroelectricity held at Rostov-on-the Don 12-16 September 1964]

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya. v. 29, no. 11, 1965, 1974-1981

TOPIC TAGS: Ferroelectric crystal, phosphate, elastic deformation, elastic modulus, elastic hysteresis, Curie point, second order phase transition

ABSTRACT: The elastic compliance and logarithmic decrement of longitudinal vibrations of single crystal bars of KH_2PO_4, KD_2PO_4 and RbH_2PO_4 of approximate dimensions 25 x 4 x 2 mm^3 were measured at the resonance frequency over a temperature range including the Curie point. The vibrations were excited and observed with the aid of the piezoelectric effect, and the electric circuit was such that the specimens were practically short-circuited. The temperature was controlled within 0.01° C. The exciting alternating field was of the order of 2.5 V/cm, and measurements were made in the presence of dc bias fields up to 4 kV/cm directed along the ferroelectric

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L 7847-66

ACC NR: AP 5028100

axis. In the case of 45° Z-cut bars, in the absence of a bias field the compliance and decrement increased sharply as the temperature was reduced through the Curie point, and as the temperature was further reduced, the compliance decreased slowly and the decrement decreased only slightly and subsequently increased. Application of a bias field, which inhibited domain reorientation, greatly reduced both the compliance and the decrement at temperatures somewhat below the Curie point. The large values of compliance and decrement below the Curie point, ascribed to domain polarization reversal and inhibited by a bias field, were not present in 45° X-cut bars. The sharp maxima of the compliance, decrement, and dielectric constant near the Curie point shifted to higher temperatures under the action of a bias field. For KH_2PO_4 this shift was 0.3×10^{-3} degree/V, which is about twice that found for KD_2PO_4 by R.M.Hill and S.K.Ichiki (Phys.Rev., 132, 1603 (1963)). Although the present data are not adequate to support the conclusion that the phase transition in KH_2PO_4 deviates from a second order transition as does that in KD_2PO_4 (R.M.Hill and S.K. Ichiki, loc. cit.), they indicate that it is desirable to reexamine the high frequency dielectric constant data with the view of disclosing such deviations. The authors thank I.V. Gavriolova, R.M. Fedosyuk, and T.V. Pichkulova for preparing the crystal specimens, and I.S. Zheludev and A.M. Shirokov for valuable remarks. Orig. art. has: 7 figures.

SUB CODE: SS, ME SUBM DATE: 00/ ORIG.REF. 010 OTH REF:005

Card 2/2

L 26740-66 EWT(1)/EWT(m)/T/EWP(t) IJP(c) JD/JG/GG

ACC NR: AP6011465 SOURCE CODE: UR/0070/66/011/002/0222/0226

AUTHOR: Shuvalov, L. A.; Mnatsakanyan, A. V.

ORG: Yerevan Polytechnic Institute im. Karl Marx (Yerevanskiy politekhnicheskiy institut); Institute of Crystallography, AN SSSR (Institut kristallografii AN SSSR)

TITLE: Elastic properties of crystals of potassium dideuterophosphate (KD_2PO_4) in a wide range of temperatures

SOURCE: Kristallografiya, v. 11, no. 2, 1966, 222-226

TOPIC TAGS: potassium compound, deuterium compound, elastic modulus, phase transition, ferroelectric effect, Curie point, electric polarization, temperature dependence, crystal property

ABSTRACT: In view of the recent revival of interest in KD_2PO_4 crystals, the authors have determined all the components of the elastic-coefficient tensor of this crystal in a wide range of temperatures, including the point of ferroelectric phase transition. The measurements were made by the usual resonance procedure using apparatus designed for the measurement of the dynamic electromechanical properties of crystals, described by one of the authors earlier (Mnatsakanyan, Trudy IV Vsesoyuznoy konferentsii po relaksatsionnym yavleniyam v tverdykh telakh [Transactions of the Fourth All-Union Conference on Relaxation Phenomena in Solids], Voronezh, 1966), and a cryostat described by the authors elsewhere (Izv. vyssh. uchebnykh zaved. Fizika, in press). The tests were made in the temperature range from -125 to +25C. The test procedure and the preparation of the sample crystals are briefly described. The results show

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UDC: 548.0: 539.371

L 26740-66

ACC NR: AP6011465

that, in spite of the prevailing opinion, an anomaly is observed at the Curie point (211.0K) not only in the elastic coefficient connected with the ferroelectric polarization, but also in all other elastic coefficients. This result agrees with data on temperature dependence of the elastic susceptances of KH_2PO_4 crystals. An additional discontinuity at a temperature approximately 30° below the Curie point is attributed to the quenching of the domain structure which is characteristic of ferroelectric phosphates. The authors thank I. S. Zheludev for helping to organize this work. The crystals were grown at the Institute of Crystallography AN SSSR by I. V. Gavrilova and her co-workers. Orig. art. has: 3 figures and 1 formula.

SUB CODE: 20/ SUBM DATE: 11Oct65/ ORIG REF: 006/ OTH REF: 009

PETROSYAN, A.V. (Yerevan); MNATSAKANYAN, B.S. (Yerevan)

Automatic control of the operation of a digital computer.
Izv AN SSSR Tekh. kib. no.1:65-72 Ja-F '64 (MIRA 17:8)

PETROSYAN, A.V.; MATSAKANYAN, B.S.; BOZOYAN, Sh.Ye.

Some properties of Hemming's code. Dokl. AN Arm. SSR 37 no.1: 3-6 '63. (MIRA 16:11)

1. Predstavleno akademikom AN Armyanskoy SSR S.N.Mergelyanom.

ACCESSION NR: AP4015293 S/0280/64/000/001/0065/0072

AUTHOR: Petrosyan, A. V. (Yerevan); Mnatsakanyan, B. S. (Yerevan)

TITLE: Automatic check of the functioning of a digital computer

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 1, 1964, 65-72

TOPIC TAGS: computer, digital computer, computer automatic check, computer automatic check theory, residue type computer check

ABSTRACT: General principles are considered of a check device that verifies the functioning of an information-processing device. The probability of detecting a malfunction is given by $P \approx \frac{n(l-1)}{l(n-1)}$, where n and l are the numbers of states of the information-processing and check automata, respectively. In computers, any register or unit can be regarded as the above automaton. A study of various automatons intended for checking the work of arithmetic-operation units has shown that all such automatons are based on residue-type checking. General formulas describing the arithmetic, logical, shift-operation, etc., characteristics of check codes are submitted. Two methods of designing the check unit are mentioned:

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ACCESSION NR: AP4015293

(1) A special adder sums up (or subtracts) all digits of the number according to this formula: $A \equiv \sum_{i=0}^{n-1} (\pm 1)^i a_i \equiv \alpha_{p\mp 1} \bmod (p \mp 1)$, and the result is compared with the check code; this method is intended for serial computers. (2) A logical scheme is constructed for comparing two numbers of specified moduli; such schemes are expedient for small moduli (2, 3, 5, 7), but starting from 15 the amount of equipment becomes excessive. The general idea of the automatic check as recommended by the author is this: A standard scheme $\Sigma_{p\pm 1}$ of addition or subtraction with a $p \pm 1$ modulus for two p-ary digits is set up; a first tier of standard Σ-schemes replaces the number being checked by a new number with one-half as many digits; the technique is repeated until a one-digit p-ary number is obtained which should coincide with the check number. Orig. art. has: 33 formulas and 1 table.

ASSOCIATION: none

SUBMITTED: 08Dec62 DATE ACQ: 12Mar64 ENCL: 00

SUB CODE: CP NO REF SOV: 002 OTHER: 001

Card 2/2

S

ACCESSION NR: AT4045972 S/2619/64/000/033/0124/0143

AUTHOR: Vvedenskaya, N. A.; Dzhanuzakov, K. D.; Iodko, V. K.; Kondorskaya, N. V.; Landysheva, N. S.; Misharina, L. A.; Mnatsakanyan, O. M.; Raglmov, Sh. S.; Semenov, P. G.; Tabulevich, V. N.

TITLE: Byulleten' sil'nykh zemletryasenly SSSR (Bulletin of the Strong Earthquakes of the SSSR) for 1961

SOURCE: AN SSSR. Institut fizlki Zemli. Trudy*, no. 33(200), 1964. Voprosy* inzhenernoy seysmologii (Problems of earthquake engineering), no. 9, 124-143

TOPIC TAGS: geophysics, seismology, earthquake, earthquake focus, earthquake epicenter, earthquake intensity, seismicity

ABSTRACT: The "Bulletin of the Strong Earthquakes of the SSSR" is a periodic annual summary which simultaneously summarizes all instrumental and noninstrumental data on the strong earthquakes ($M \geq 4$) occurring in the Soviet Union. The Bulletin contains a catalogue of earthquakes (reproduced in the paper for 1961 in the form of a lengthy table), a map of the epicenters and a brief description of the strongest earthquakes. The catalogue includes instrumental data on the coordinates of the epicenter, focal depth, magnitude M and the time of occurrence of earthquakes, taken from the Byulleten' seti seysmicheskikh stantsiy SSSR (Bulletin of the Network of Seismic Stations of the SSSR) and noninstrumental data -- information on

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ACCESSION NR: AT4045972

the sensed intensity of earthquakes, received from reports submitted by local inhabitants or from investigations devoted to descriptions of the strongest earthquakes. With the exception of the Kurile-Kamchatka zone, in the catalogue there are data for all earthquakes with $M \geq 4$, and all earthquakes for which M was not determined but which were recorded by seismic stations of the general type as having epicentral distances greater than 1,000 km. Data for the Kurile-Kamchatka zone include all earthquakes with $M \geq 5$. A map is presented in the paper which shows the location of the epicenters of the earthquakes listed in the catalogue; numbers on the map correspond to the numerical listing in the catalogue. In 1961 there were 272 earthquakes in the SSSR with $M \geq 4$. Their distribution by regions and intensities is tabulated in the original text. Fig. 1 of the Enclosure shows the value $\sum E^{1/2}$ for individual seismically active zones of the SSSR for 1961, computed using the formula $\lg E = 11.8 + 1.5\,M$. Fig. 2 of the Enclosure shows the change with time of the deviation from the mean annual value $\sum E^{1/2}$ for four seismically active zones. Along the y-axis of the graph there is plotted the value $\sum E^{1/2} - (\sum E^{1/2})$ mean and along the x-axis - time (1946-1961). The value $(E^{1/2})$ mean for each zone is indicated at the right of the graph. The authors go on to describe briefly, but individually, the most important seismic phenomena occurring in various regions of the SSSR in 1961. The annual publication of the Bulletin was begun in 1956 and until 1961 it was printed in the Trudy* Instituta Fiziki Zemli AN SSSR in the collection of articles Voprosy inzhenernoy seysmologii

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ACCESSION NR: AT4045972

(Problems of Earthquake Engineering). Beginning with the Bulletin for 1962, the report will be published in annual numbers of Zemletryaseniya SSSR, which will be a separate publication. Orig. art. has: 11 figures and 1 table.

ASSOCIATION: Institut fiziki Zemli AN SSSR (Institute of Physics of the Earth, AN SSSR)

SUBMITTED: 00 ENCL: 03 SUB CODE: ES

NO REF SOV: 004 OTHER: 000

Card 3/3

[illegible]SKAYA, [illegible]; [illegible], [illegible]; [illegible], [illegible]; [illegible]SKAYA, [illegible];
[illegible], [illegible]; [illegible]; [illegible], [illegible]; [illegible], Sh.S.;
[illegible]EROV, [illegible]; [illegible], V.I.

[illegible] of powerful earthquakes in the U.S.S.R. during 1961.
Trudy [illegible] [illegible] seism. [illegible]
[illegible]

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001134820005-7

MNATSAKANYAN, G.G., inzh.

Rolled-fill earth dam with interior upstream apron. Gidr. i stroi. 30 no.5:17-18 My '60. (MIRA 14:5)

(Dams)

MNATSAKANYAN, G.G., inzh.

Using the pressure derivation of a hydroelectric power station as spillway structures. Gidr. stroi. 33 no.5:24-26 My '63. (MIRA 16:5)

(Hydroelectric power stations--Design and construction)

REZIKYAN, A.M.; MNATSAKANYAN, K.G.

Illumination system for bubble and Wilson chambers. Prib. i tekh. eksp. no.6:115-118 N-D '60. (MIRA 13:12)

1. Fizicheskiy institut AN ArmSSR.
(Ionization chambers)

REZIKYAN, A.M.; MNATSAKANYAN, K.G.; ISKAYELYAN, M.Kh.

Gas-discharge stabilizer of direct-current voltages. Prib. i tekh. eksp. 8 no.5:139-142 S-O '63. (MIRA 16:12)

1. Institut radiofiziki i elektroniki AN ArmSSR.

USSR Chemical Technology Chemical Products and Their Application -- Food Industry, I-28

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 6635

Author: Dilanyan, Z Kh., Mnatsakanyan, L. B.

Institution: Academy of Sciences Armenian SSR

Title: Preparation of Matsun Paste (Kamats Matsun)

Original Publication: Izv AN ArmSSR, Biol i s.-kh. n., 1955, 8, No 11, 137-141

Abstract: Matsun is an acidulous dietary milk product, made in Transcaucasia from milk of cows, sheep and buffaloes, used singly or in combination, and consumed in freshly prepared condition. Matsun can be kept for ≤2-3 days. For more prolonged storage, over 2-3 months, the whey is expressed from matsun in the autumn to get the matsun paste which constitutes the basic food product during the winter months and is also a remedy against gastro-intestinal disorders. With the view of initiating the manufacture of the paste the Dairy Department of the Yerevan Zoological and Veterinary Institute has worked out a

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USSR/Chemical Technology. Chemical Products and Their Application -- Food industry, I-28

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 6635

Abstract: technological procedure. The milk is pasteurized at 85-90°, cooled to 36-40° and inoculated. After 3-5 hours the matsun is cooled to 10° and allowed to ripen for 12 hours. The finished matsun is placed in cheesecloth bags to separate the whey. The process requires 8-9 hours. Thereafter the material is pressed for 8-9 hours (using a weight of 2-3 kg per 1 kg of material), and packed in glass containers of 200 g and 6 kg kegs which are stored at 0-5°. Yield of paste from cow milk with a fat content of 3.2 g/100 ml is of 24-25%. The paste contains 12.5-13.5% fat and ≤70% moisture.

Card 2/2

DILANYAN, Z.Kh.; MNATSAKANYAN, L.B.

Sour milk products as calf feed and their digestibility. Izv. AN Arm. SSR. Biol. nauki 14 no.7:71-76 Jl '61. (MIRA 14:8)

1. Kafedra tekhnologii moloka Yerevanskogo zooveterinarnogo instituta.
(CALVES--FEEDING AND FEEDS)
(MILK, FERMENTED)

BARYSHNIKOVA, R.A.; MNATSAKANYAN, M.G., red.

[Manual on a course in "Calculation of choke-type magnetic amplifiers with Ш cores"] Posobie k kursovym proektam i tipovym raschetam "Raschet drossel'nykh magnitnykh usilitelei na Ш-obraznykh serdechnikakh. Moskva, Mosk. energ. in-t, 1965. 22 p.

(MIRA 19:1)

MNATSAKANYAN, Marat Grigorovich, stazher; [illegible] Yu., Grant Ashotovich

Level of the reverse voltage in the rectifier of an exciter three-phase current transformer. Izv. vys. ucheb. zav.; elektromekh. 7 no.5:587-597 '64. (MIRA 17:6)

1. Kafedra elektroapparatostroyeniya Moskovskogo energeticheskogo instituta (for Mnatsakanyan). 2. Starshiy inzhener Armyanskogo filiala Vsesoyuznogo nauchno-issledovatel'skogo instituta elektromekhaniki (for Gevorkyan).

MNATSAKANYAN, Marat Gaykovich, aspirant

Steady-state conditions in electric current transformers with excitation operating in a three-phase network with an active-inductive d.c. load. Izv. vys. ucheb. zav.; elektromekh. 6 no.6:683-696 '63. (MIRA 16:9)

1. Kafedra elektroapparatostroyeniya Moskovskogo energeticheskogo instituta.

(Electric transformers) (Electric controllers)

MNATSAKANYAN,

[redacted]

SAAKYAN, K.A.; MNATSAKANYAN, R.G.

Faint blue stars in the region $\alpha = 17^h18^m$, $\delta = +43^\circ30'$ (1950).
Astrofizika 1 no.2:229-234 Je '65. (MIRA 18:10)

1. Byurakanskaya astrofizicheskaya observatoriya.

BARANNIK, P.I., prof.; MIKHALYUK, I.A., dotsent; MNATSAKANYAN, R.P., assistent; TSVETKOVA, I.N.; YATSULA, G.S.

Zinc, manganese, cobalt, and iodine in potable artesian water in Kiev. Gig. i san. 26 no.4:95-97 Ap '61. (MIRA 15:5)

1. Iz kafedry obshchey gigiyeny Kiyevskogo meditsinskogo instituta.
(KIEV—WATER—ANALYSIS)

MIATSAKANYAN, Sh.; MANUCHARYAN, R.A.

Epidemiological significance of first summer generation of Anopheles maculipennis. Med. parazit., Moskva no.1:25-29 Jan-Feb 1953. (CIML 24:4)

1. Of the Entomological Department of the Institute of Malaria and Medical Parasitology of the Ministry of Public Health Armenian SSR (Director of Institute A. T. Tsaturyan; Head of Department -- A. I. Chubkova).

MNATSAKANYAN, Sh.S.

Results of a study of "sodium salt," a new disinfectant. Zhur. eksp. i klin. med. 3 no.5 95-98 '63.

(MIRA 17:1)

1. Institut epidemiologii i gigiyeny Ministerstva zdravo okhraneniya ArmSSR.

MNDZHOYAN, A.L.; MNATSAKANYAN, V.A.; YEGIAZARYAN, I.S.

Alkaloids of Goebelia alopecuroides. Izv.AN Arm.SSR.Khim. nauki 17 no. 3:345-347 '64. (MIRA 17:7)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.

MNDZHOYAN, A.L., akademik; MNDZHOYAN, O.L.; BARDASARYAN, E.R.; MNATSAKANYAN, V.A.

Studies on derivatives of substituted acetic acids. Report No.13: Some dialkylaminoalkyl esters of phenylalkyl and aryl acetic acids. Dokl.AN Arm.SSR 30 no.2:97-107 '60. (MIRA 13:6)

1. Institut tonkoy organicheskoy khimii Akademii nauk Armyanskoy SSR. 2. Akademiya nauk Armyanskoy SSR (for Mndzhoyan, A.L.).
(Acetic acid)

[redacted]

SHIPUNOV, K.P., prof.; ARKHANGEL'SKIY, I.I., prof.; SHATOKHIN, N.G., dotsent; MKRTSAKANYAN, V.B., aspirant

Anatoxin against the poison of the karakurt. Veterinariia 36 no.6:55-56 Je '59. (MIRA 12:10)

1. Uzbekskiy sel'skokhozyaystvennyy institut.
(Spiders)

CHEPUROV, K.P., prof.; MNATSAKANYAN, V.B., aspirant

Immunobiologic preparations against karakurt toxicosis. Veterinariia 38 no.6:42-45 Je '61. (MIRA 16:6)

1. Samarkandskiy sel'skokhozyaystvennyy institut.
(Uzbekistan--Spiders) (Toxins and antitoxins)

86755
S/120/60/000/006/031/045
E032/E314

21.5200 (1033, 1191, 1138)

AUTHORS: Rezikyan, A.M and Mnatsakanyan, K.G.

TITLE: Illuminating System for Bubble and Wilson Chambers

PERIODICAL: Pribory i tekhnika eksperimenta 1960 No 6 pp 115 - 118

TEXT: Large-volume bubble and Wilson chambers have recently come into use in high-energy nuclear physics. A number of methods of producing uniform illumination have been described (Lofgren et al, Ref. 1; Ballario et al Ref. 2) but they all suffer from the disadvantage that they involve the use of long linear sources of light. Rays leaving such a source are transformed into a parallel beam only in the plane perpendicular to the source and hence uniform illumination is not produced in the direction parallel to the source. In the system described in the present paper this disadvantage is considerably reduced. The system employed by the present authors is in the form of a cylindrical plano-convex lens made from perspex and consisting of suitably cut perspex sheets glued together as shown in Fig. 1. The perspex layers are

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Illuminating System for Bubble and Wilson Chambers

separated from each other by opaque films. This ensures that the rays are collimated not only in the XZ plane (Fig. 1) but also in the YZ plane. In this arrangement each transparent layer transmits and collimates light emitted not from the entire length of the source but from a part of it which is determined by

$$S = 2b + a$$

$$b = \frac{a\left[r/(1 - 1/n) - d\right]}{\sqrt{d^2 + a^2}}$$

where a is the thickness of the transparent layer,
n is the refractive index of the material,
d is the thickness of the lens,
S is the length of the source which is being used and
r is the radius of the cylindrical surface of the lens

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E032/E314

Illuminating System for Bubble and Wilson Chambers

The opaque films are produced by a dichlorethane solution of black aniline dye. The faces of the perspex layers are wetted with the solution and then pressed against each other for a few hours until they become firmly attached. The pile thus obtained is worked to the required shape and the surface is polished by chromium oxide. For large chambers the illuminating system was made separately from the chamber and was of the form shown in Fig. 2, in which 1 is a glass partition, 2 is a lens, 3 is the illuminator, 4 is the body and 5 is the reflector. The optimum parameters of the illuminating system and the quality of the lenses depend on the working characteristics of each particular chamber. The quality of the lenses also depends on the focal length. For bubble chambers, large focal lengths are undesirable since the illuminating system should be located within the chamber and the glass partition 1 must withstand the full pressure of the liquid. For Wilson chambers a greater focal length can be chosen, i.e. the number of illuminators and lenses can be reduced since the system can be located outside

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S/120/60/000/006/031/045
E032/E314

Illuminating System for Bubble and Wilson Chambers

the chamber. The present authors have made three lenses of the above type, using perspex layers with a = 2.3 and 10 mm ε = 90 mm and ℓ = 70 mm (see Fig. 1). The radius of curvature of the cylindrical surface was r = 80 mm and thickness of the lens d = 60 mm. Special vacuum tungsten linear filaments (300 mm long) were also prepared and during the measurements the illuminators were diaphragmed so that the length of the diaphragm was equal to that of the lens. For lenses with a = 2.3 mm and c/a = 0.75 (Fig. 1) the increase in the illumination towards the edges (in the OX direction) did not exceed 6.5% of the average value. With a = 3 mm and a = 10 mm the corresponding figure was 9% and 10.4%, respectively. The variation of the illumination with distance along the OX axis is shown in Fig. 3. Similar plots for the OY and OZ directions are shown in Figs. 4 and 5. It was found that the best results were obtained with a lens having a = 2.3 mm in the uniformly

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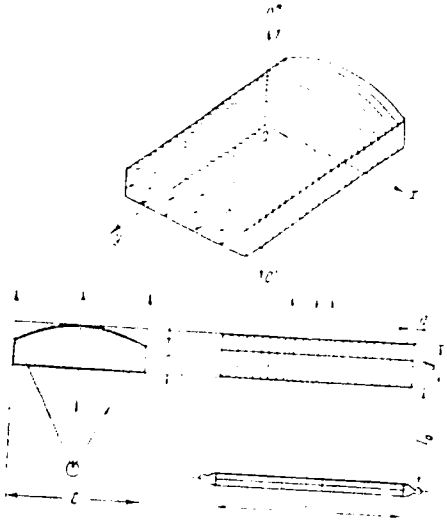

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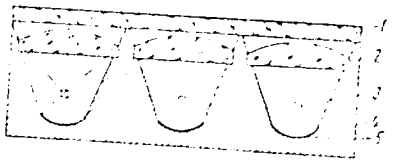
Illuminat[illegible] for [illegible]



There are 5 figures, 2 [illegible] 3 [illegible] references: 1 [illegible], 2 English.

ASSOCIATION: Fizicheskiy institut Akademii nauk SSSR (Physics Institute of the Academy of Sciences USSR)

SUBMITTED: November 10, 1957

Card 6/6

MNATSAKANYAN, S. A.

PHASE I BOOK EXPLOITATION SOV/4893

Vsesoyuznoye soveshchaniye po fizike, fiziko-khimicheskim svoystvam ferritov i fizicheskim osnovam ikh primeneniya. 3d, Minsk, 1959

Ferrity; fizicheskiye i fiziko-khimicheskiye svoystva. Doklady (Ferrites; Physical and Physicochemical Properties. Reports) Minsk, Izd-vo AN BSSR, 1960. 655 p. Errata slip inserted. 4,000 copies printed.

Sponsoring Agencies: Nauchnyy sovet po magnetizmu AN SSSR. Otdel fiziki tverdogo tela i poluprovodnikov AN BSSR.

Editorial Board: Resp. Ed.: N. N. Sirota, Academician of the Academy of Sciences BSSR; K. P. Belov, Professor; Ye. I. Kondorskiy, Professor; K. M. Polivanov, Professor; R. V. Telesnin, Professor; G. A. Smolenskiy, Professor; N. N. Shol'ts, Candidate of Physical and Mathematical Sciences, E. M. Smolyarenko; and L. A. Bashkirov; Ed. of Publishing House: S. Kholyavskiy; Tech Ed.: I. Volokhanovich.

PURPOSE: This book is intended for physicists, physical chemists, radio electronics engineers, and technical personnel engaged in the production and use of ferromagnetic materials. It may also be used by students in advanced courses in radio electronics, physics, and physical chemistry.

COVERAGE: The book contains reports presented at the Third All-Union Conference on Ferrites held in Minsk, Belorussian SSR. The reports deal with magnetic transformations, electrical and galvanomagnetic properties of ferrites, studies of the growth of ferrite single crystals, problems in the chemical and physicochemical analysis of ferrites, studies of ferrites having rectangular hysteresis loops and multicomponent ferrite systems exhibiting spontaneous rectangularity, problems in magnetic attraction, highly coercive ferrites, magnetic spectroscopy, ferromagnetic resonance, magneto-optics, physical principles of using ferrite components in electrical circuits, anisotropy of electrical and magnetic properties, etc. The Committee on Magnetism, AS USSR (S. V. Vonsovskiy, Chairman) organized the conference. References accompany individual articles.

Ferrites (Cont.) SOV/4893

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MNATSAKANYAN, Ya., uchenyy sekretar'

Work of scientific technological societies. Prom.Arm. 4 no.2:58-60 F '61. (MIRA 14:6)

1. Nauchno-tekhnicheskiye obshchestva Armyanskoy SSR. (Armenia—Engineering research)

MNATSAKANYAN, Ya.

Organizations of Scientific and Technical Societies assume the duties of technical councils. Prom.Arm. 5 no.4:59-60 Ap '62. (MIRA 15:5)

1. Uchenyy sekretar' Respublikanskogo pravleniya Nauchno-tekhnicheskogo obshchestva mukomol'noy i krupyanoy promyshlennosti i elevatornogo khozyaystva.
(Armenia--Technological innovations)

MNATSAKANYAN, Ya.

The main objective of scientific and technological societies is the struggle for technical development. Prom. Arm. 6 no.6: 61-63 Je '63. (MIRA 16:8)

(Armenia—Technological innovations)

AVRUKH, Meyer Girshevich; LI, P.Z., nauchnyy red.; MNDOYAN, A.A., nauchnyy red.; KUSKOVA, A.I., red.; ERASTOVA, N.V., tekhn.red.

[Design of plastic boats] Proektirovanie sudov iz plastmassy. Leningrad, Gos.soiuznoe izd-vo sudostroit.promyshl., 1960. 339 p. (MIRA 13:12)
(Shipbuilding) (Plastics)

MNDOYAN, A., inzh.

Flagship of winged river vessels. Rech. transp. 20 no.12: 33 D '61. (MIRA 14:12)

(Planing hulls)

MNDOYAN, A. A., inzh.

Ships for rapid transportation. Rech. transp. 21 no.3:20-24 '62. (MIRA 15:4)
(Planing hulls) (Merchant marine--Passenger traffic)

MNDOYAN, A., inzh.

What should the tank vessel fleet be like. Rech. transp. 21 no.1:25-26 Ja '62. (MIRA 16:8)

(Tank vessels)
(Inland water transportation)

POSOKHIN, M.V., arkhitektor; MNDOYANTS, A.A., arkhitektor.

Interior decoration. Gor.khoz.Mosk. 21 no.3:6-14 Mr '47. (MLRA 6:11)
(Moscow--House decoration) (House decoration--Moscow)

1. M. V. POSOKHIN, Arch., A. A. MELOYANTS, Arch.

2. USSR (600)

4. Apartment Houses - Moscow

7. 16-story apartment house on the Ploshchad' Vosstaniya. Gor.khoz. Mosk. 23 no. 7. 1949.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

1937-1956

17

Quinoline compounds as sources of medicinal products V. Anesthetics of the series 6-alkoxy-8-aminoquinoline. O. Yu. Magidson and A. L. Mikhoyan. *J. Gen. Chem. (U. S. S. R.)* 7, 1557-63 (1937); *cf. C. A.* 30, 1514⁷. — 1-Diethylamino-2,2-dimethyl-3-bromopropane hydrobromide and 6-ethoxy-8-aminoquinoline form *8-(1-γ-diethylamino-β,β-dimethylpropyl) amino-6-ethoxyquinoline* b_5 193-8°, *di-HCl salt* m. 205-7° (decompn.). By using the appropriate quinoline deriv., the corresponding *6-propoxy compd.* $b_{1.5}$ 199-204°, *di-HCl salt* m. 214-17° (decompn.), *6-butoxy compd.* b_5 200-12°, *di-HCl salt* m. 218-20° (decompn.) and *6-benzoxy compd.* m. 69-70° are prepd. The 6-octyl compd. could not be prepd. in this way. The min. anesthetic dose on a rabbit's eye for the Et and Pr compds. was 0.0075% and for the Bu and $PhCH_2$ compds., 0.01%. The toxic dose for mice was 3 mg. for the Et and Pr compds. and 4-5 mg. for the Bu and $PhCH_2$ compds. H. M. Leicester

[redacted]

Synthesis of new anesthetics. III Esters of 3-pyridinecarboxylic acid and of some amino alcohols. A. L. Mndzhoyan (Erevan Med. Inst.). *J. Gen. Chem.* (U.S.S.R.) **16**, 1029-32(1946)(in Russian); cf. *C.A.* **41**, 2033*e*. A no. of amino alc. esters of nicotinic acid were prepd. for tests as *anesthetics*. However, they had no anesthetic action and high toxicity. Nicotinic acid (37 g.) suspended in 60 cc. benzene was treated slowly with 116 g. $SOCl_2$ with cooling, then heated 12 hrs. to 110-20° to yield, on cooling, 92.4% *nicotinoyl chloride-HCl*, m. 158-60°. Equiv. amts. of the chloride and the amino alc. were heated in benzene soln. 12 hrs. to 100-10° to yield the desired *esters*, prepd. from the following alcs.: *dimethylaminoethanol*, b_{16} 140-1° (*picrate*, m. 172°) (77.5%), *diethylaminoethanol*, b_{11} 166-7° (78.3%) (*picrate*, m. 118°), *1-dimethylamino-2,2-dimethyl-3-propanol*, b_{11} 150-1° (84%) (*picrate*, m. 183°), *1-dipropylamino-2,2-dimethyl-3-propanol*, b_{10} 184-5° (87%) (*picrate*, m. 178°); *1,3-bis(dimethylamino)-2-propanol*, b_{10} 151-2° (80%) (*picrate*, m. 181°); *1,3-bis(diethylamino)-2-propanol*, b_{10} 170-80° (81.7%) (*picrate*, m. 163°). **IV. Esters of p-amino- and of p-butylaminobenzoic acids and some diamino alcohols.** *Ibid.* 1033-40. A no. of amino alc. esters of *p*-aminobenzoic acid were prepd., using diamino alcs. The products were generally more potent than the esters of monoamino alcs., while the most potent was the tetrabutyldiamino deriv., 7-8 times more effective than novocaine. The toxicity, however, was relatively high. Use of Bu-substituted *p*-amino acid gave even more effective anesthetics, the most potent being the ester of $(Et_2NCH_2)_2CHOH$, 5-6 times more effective than dicaine. The prepns. were conducted as follows: p-$O_2NC_6H_4COCl$ was heated with the appropriate alc. in C_6H_6 10-15 hrs. to 110-20°, the solvent removed to leave the residue of the desired NO_2 ester and the latter reduced in the presence of Adams Pt catalyst in EtOH, with some benzene (50-60 cc.). The following esters were prepd.: *1,3-Bis(dimethylamino)-2-propyl p-nitrobenzoate* (85.5%), m. 30-1°; *NH_2 deriv.* (97.6%), m. 108.5° (*HCl salt*, m. 197°; *dipicrate*, m. 219-20°); *1,3-Bis(diethylamino)-2-propyl p-nitrobenzoate* (84.2%), m. 39-0.5°; *NH_2 deriv.*, m. 47° (97%) (*HCl salt*, m. 189°; *dipicrate*, m. 206-7°); *1,3-Bis(dipropylamino)-2-propyl p-nitrobenzoate* (97.5%), oil (*picrate*, m. 188°); *NH_2 deriv.*, oil (*dipicrate*, m. 170-1°); *1,3-Bis(dibutylamino)-2-propyl p-nitrobenzoate* (94.3%), oil (*picrate*, m. 153-4°); *NH_2 deriv.* (97.9%), oil (*dipicrate*, m. 153-4°). p-$H_2NC_6H_4CO_2K$ (70 g.), 43 cc. water, and 12 g. BuBr were heated 10-12 hrs. at 90-5° to give, on cooling, 45.8% *p-butylaminobenzoic acid* (I), m. 151-2° (from EtOH); the mother liquor yielded 20 g. unreacted acid and 15 g. unreacted BuBr (obviously a printer's error in the amt. of BuBr used); 60 g. I was added at 4-5° to 148 g. $SOCl_2$, stirred at 5-6° 3-4 hrs., and treated with 200 cc. dry Et_2O to give 84.1% *p-butylaminobenzoyl chloride-HCl*, which was condensed with the desired amino alcs. in C_6H_6 at 40-5°. The following esters were isolated: *1,3-bis(dimethylamino)-2-propyl* (51.9%) (*dipicrate*, m. 176-7°), *1,3-bis(diethylamino)-2-propyl* (51.3%) (*dipicrate*, m. 140-1°), *1,3-bis(dipropylamino)-2-propyl* (51.7%) (*dipicrate*, m. 135-6°), *1,3-bis(diallylamino)-2-propyl* (no yield given) (*dipicrate*, m. 80° (decompn.)), *1,3-bis(dibutylamino)-2-propyl* (56.1%) (*dipicrate*, m. 130-1°). G. M. Kosolapoff

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

MNDZHOYAN, A. L.

Some tetraalkyldiaminoisopropyl esters of p-alkoxybenzoic acid. A. L. Mndzhoyan and N. A. Babiyan. *Izvest. Akad. Nauk Armyan. S.S.R., Ser. Fiz.-Mat., Estestven., i Tekh. Nauk* 6(3-7)(1954)(in Russian, Armenian summary, 71-2).—Eight new α,γ-bis(dialkylamino)isopropyl esters of p-alkoxybenzoic acid having the structure p-R'OC$_6$H$_4$CO$_2$CH(CH$_2$NR$_2$)$_2$, where R = Me or Et and R' = Me, Et, Pr, or Bu, were prepd. by the action of the chloride of the acid with α,γ-dichloropropanol and the subsequent amination of the chloro esters by secondary amines in C$_6$H$_6$. Four α,γ-dichloroisopropyl esters of p-methoxy-, p-ethoxy-, p-propoxy-, and p-butoxybenzoic acids were also isolated. The phys. and pharmacol. properties of these compds. were studied and exptl. results show that some of these esters are strong local anesthetics. Microbiol. expts. show compatible action of the synthesized compds. and sulfa drugs.

Emanuel Merlinger

Mndzhoyan, A.L.

USSR

p-Alkoxybenzoic acids. I. α-Methyl-γ-dimethylaminopropyl esters of p-alkoxybenzoic acids and their derivatives. A. L. Mndzhoyan, V. G. Afrikyan, A. A. Dokhikyan, and A. N. Oganesyan. *Doklady Akad. Nauk Armyan. S.S.R.* 18, 7–9(in Russian; 9, in Armenian)(1954).—The following p-ROC$_6$H$_4$CO$_2$CHMeCH$_2$CH$_2$NMe$_2$ (I) and salts were prepd. for biol. tests (R, b.p./mm., and the m.ps. of the HCl, MeI, and EtI salts given): Me, 170–1°/2, 185–6°, 166–7°, 135–5.5°; Et, 165–6°/1, 135–6°, 162–3°, 143–4°; Pr, 195–6°/2, 118–19°, 151–52°, 119–20°; iso-Pr, 165–6°/2.5, 110–11°, 169–70°, 141–2°; Bu, 101–2°/1, 53–54°, 154–5°, 116–17°; iso-Bu, 174–5°/2, 125–6°, 170–1°, 128–9°; Am, 186–7°/1, 112–13°, 132–3°, 108–9°; iso-Am, 166–7°/2, 116–17°, 145–6°, 118–19°; Me(CH$_2$)$_6$, 263–4°/2, —, 143–4°, 133–4°; Me$_2$CH(CH$_2$)$_4$, 204–5°/2.5, 123–4°, 142–3°, 95–6°; Me(CH$_2$)$_7$, 214–15°/1, 94–5°, 151–2°, 135–6°; Me$_2$CH(CH$_2$)$_5$, 220–21°/2.5, —, 146–7°, 107–8°; Me(CH$_2$)$_8$, 214–15°/2.5, 80–1°, 154–5°, 130–1°; PhCH$_2$, 241–2°/2, 144–5°, 160–90°, 165–6°; PhCH$_2$CH$_2$, 245–6°/2, 74–5°, 135–6°, 127–8°.

A. Shadan

MNDZHOYAN, A.L.

USSR

Synthesis of derivatives of dibasic carboxylic acids. I. Derivatives of succinic acid. A. L. Mndzhoyan, O. L. Mndzhoyan, and O. E. Gasparyan (Inst. Fine Org. Chem. Acad. Sci. Armen. S.S.R.) *Doklady Akad. Nauk. Armyan. S.S.R.* 18, No. 1, 11-12(1954)(in Russian).—The following succinic acid derivs. are reported without further details. $(CH_2CO_2R)_2$ (*R*, % yield, and m.p. or b.p., d_{20} and n_D^{20} given): $CH_2CH_2NMe_2$, 64.1, b_4 135°, 1.0241, 1.4479 (*HCl salt*, m. 182-3°; *oxalate*, m. 134°); $CH_2CH_2NMe_2I$, 94.2, m. 247°; $CH_2CH_2NMe_2EtI$, 93.8, m. 193°; $CH_2CH_2CH_2NMe_2$, 41.2, b_4 146°, 0.9365, 1.4498 (*HCl salt*, m. 158°; *oxalate*, m. 123°); $CH_2CH_2CH_2NMe_2I$, 85.1, m. 150-1°; $CH_2CH_2CH_2NMe_2EtI$, 86.6, m. 132°; $CHMeCH_2CH_2NMe_2$, 40, b_4 147°, 0.9752, 1.4478 (*HCl salt*, m. 150-1°; *oxalate* m. 127°); $CHMeCH_2CH_2NMe_2I$, 83, m. 221-2°; $CHMeCH_2CH_2NMe_2EtI$, 80.1, m. 195-6°; $CHMeCHMeCH_2NMe_2$, 60, b_5 161°, 0.9643, 1.4498 (*HCl salt*, m. 165-6°; *oxalate*, m. 140-1°); $CHMeCHMeCH_2NMe_2I$, 72.4, m. 223°; $CHMeCHMeCH_2NMe_2EtI$, 79.1, m. 168°; $CH_2CMe_2CH_2NMe_2$, 50, b_5 152°, 0.9578, 1.4494 (*HCl salt*, m. 135-6°; *oxalate*, m. 183°); $CH_2CMe_2CH_2NMe_2I$, 82.1, m. 203°; $CH_2CMe_2CH_2NMe_2EtI$, 74.8, m. 165-6°; $CH_2CH_2NEt_2$, 43, b_5 180°, 0.0749, 1.4478 (*HCl salt*, m. 128°; *oxalate*, m. 133°); $CH_2CH_2NEt_2MeI$, 90.1, m. 144°; $CH_2CH_2NEt_2I$, 84.3, m. 164°; $CHMeCH_2CH_2NEt_2$, 62, b_4 103°, 0.9485, 1.4518; $CHMeCH_2CH_2NMeEt_2I$, 74.8, m. 150-1°; $CHMeCH_2CH_2NEt_2I$, 31.4, m. 186°; $CHMeCHMeCH_2NEt_2$, 65, b_5 178°, 0.9480, 1.4526; $CHMeCHMeCH_2NEt_2Me I$, 75.8, oil; $CHMeCHMeCH_2NEt_2I$, 64.9, m. 200°; $CH_2CMe_2CH_2NEt_2$, 81, b_5 178°, 0.9490, 1.4530 (*HCl salt*, m. 144-6°); $CH_2CMe_2CH_2NEt_2MeI$, 80.7, m. 193-4°; $CH_2CMe_2CH_2NEt_2I$, 84.3, oil. G. M. Kosolapoff

MNDZHOYAN, A. L.

MNDZHOYAN, A.L.; AFRIKYAN, V.G.; DOKHIKYAN, A.A.

Investigation of the synthesis of p-alkoxy benzoic acid derivatives. Part 2. Dokl. AN Arm. SSR 18 no.2:39-43 '54. (MLRA 8:3)

1. Deystvitel'nyy chlen Akademii nauk Arm. SSR (for Mndzhoyan).
2. Laboratoriya farmatsevticheskoy khimii Akademii nauk Armyanskoy SSR.

(Benzoic acid)

MNDzhovan, AL

USSR

✓Synthesis of derivatives of dibasic carboxylic acids—II. Derivatives of succinic acid. A. L. Mndzhoyan, O. L. Mndzhoyan, and N. A. Babilyan. *Doklady Akad. Nauk Armyan. S.S.R.* 18, 45–8(in Russian; 48–9, Armenian summary)(1954).—The following derivs. are reported without description of the methods used. $Me_2NCH_2CH_2O_2CCH_2CH_2CO_2R$ (*R*, % yield, b.p./mm., d_4, $n^{20}D$, m.p. HCl salt, m.p. methiodide given): *Me*, 80.2, 108°/2, 1.0547, 1.4350, 91°, 110°; *Et*, 70.6 104–5°/1.5, 1.0316, 1.4345, 100°, 76°; *Pr*, 84.6, 118°/2, 1.0110, 1.4351, 102°, 105°; *iso-Pr*, 77.6, 141°/10, 1.0077, 1.4334, 119°, 118°; *Bu*, 70.2, 132°/2, 0.9995, 1.4370, 82°, 101°; *iso-Bu*, 70.8, 135°/4, 0.9946, 1.4342, 120°, 104°; *iso-Am*, 72, 141°/3, 0.9892, 1.4370, 115°, 83°; C_6H_{11}, 86.6, 160°/4, .0342, 1.4579, 128°, 110°; *Pk*, 80.6, 103°/2, 1.0004, 1.4947 115°, 136°. $Et_2NCH_2CH_2O_2CCH_2CH_2CO_2R$: (*R*, % yield, b.p./mm., d_4, $n^{20}D$, m.p. HCl salt, m.p. ethiodide given). *Me*, 68.8, 120–1°/2, 1.0206, 1.4390, 76°, 63°; *Et*, 67.3, 123°/1.5, 1.0045, 1.4380, —, 95°; *Pr*, 86.2, 135°/2, 0.9916, 1.4391, —, 61°; *iso-Pr*, 51.5, 130°/3, 0.9822, 1.4360, —, 58°; *Bu*, 75, 171°/10, 0.9818, 1.4400, —, 56°; *iso-Bu*, 63.8, 148°/4, 0.9760, 1.4376, —, 42°; *iso-Am*, 72.4, 151°/3, 0.9736, 1.4403, —, 45°; C_6H_{11}, 79.3, 155°/0.5, 1.0131, 1.4587, 98°, 71°; *Pk*, 73, 165–6°/2, 1.0021, 1.4570, 141°, 136°.

G. M. Kosolapoff

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MNDZHOYAN, A. L.

USSR

Synthesis of derivatives of p-alkoxybenzoic acids. III. 1,2-Dimethyl-3-(dialkylamino)propyl esters of p-alkoxybenzoic acids. A. L. Mndzhoyan, V. G. Afrikyan, and M. T. Grigory [Grigoryan]. *Doklady Akad. Nauk Armyan. S.S.R.* 18, 75–8 (1954) (in Russian); cf. *C.A.* 49, 8853c.—The following compds. are reported without description of the synthetic methods used; *p*-$ROC_6H_4CO_2CHMeCHMeCH_2NMe_2$ (R, % yield, b.p./mm., d_{20}, and n_D^{20} shown): *iso*-Bu, 88.5, 171–5°/2, 0.9964, 1.5032 (*picrate*, m. 157°; *methiodide*, m. 94–5°; *ethiodide*, no data reported); *Am*, 70.8, 196–7°/1, 0.9905, 1.4981 (*picrate*, m. 118°); *n*-C_7H_{15}, 74.8, 245–6°/2, 0.9894, 1.5030 (*picrate*, m. 100°; *methiodide*, m. 104–5°; *ethiodide*, m. 97–8°); $Me_2CH(CH_2)_2$, 75.8, 200–1°/2, 0.9840, 1.5018; *n*-C_8H_{17}, 73, 219–20°/1, 0.9774, 1.4969 (*picrate*, m. 110°); $Me_2CH(CH_2)_3$, 75.2, 198–9°/2, 0.9820, 1.4990; *n*-C_9H_{19}, 54.7, 215–16°/2, 0.9825, 1.5032 (*picrate*, m. 126°; *ethiodide*, m. 95–6°); $PhCH_2CH_2$, 54, 230–1°/2, 1.0522, 1.5340. *o*-$ROC_6H_4CO_2CHMeCHMeCH_2NEt_2$: *iso*-Bu, 80.7, 184–6°/2, 0.9802, 1.5010 (*methiodide*, m. 160–1°; *ethiodide*, m. 92–3°); *Am*, 73.7, 213–14°/1, 0.9813, 1.4958 (*picrate*, m. 151°); *n*-C_7H_{15}, 77.9, 251–2°/2, 0.9828, 1.5020 (*picrate*, m. 91°; *ethiodide*, m. 93–4°); $Me_2CH(CH_2)_2$, 76.8, 241–2°/2, 0.9724, 1.4934; *n*-C_8H_{17}, 65.6, 224–5°/1, 0.9689, 1.4959; $Me_2CH(CH_2)_3$, 61.5, 237–8°/2, 0.9677, 1.4946; *n*-C_9H_{19}, 61.9, 224–5°/2.5, 0.9665, 1.4962; $PhCH_2CH_2$, 50.6%, 250–1°/2, 1.0510, 1.5452.

G. M. Kosolapoff

MNDZHOYAN, A.L.; MNDZHOYAN, O.L.; GASPARYAN, O.Ye.

Investigation of the synthesis of dibasic carboxylic acid derivatives. Part 3. Dokl. AN Arm.SSR 18 no.3:79-82 '54. (MLRA 8:3)

1. Deystvitel'nyy chlen Akademii nauk Armyanskoy SSR (for Mndzhoyan).
2. Laboratoriya farmatsevticheskoy khimii Akademii nauk Armyanskoy SSR. (Glutaric acid)

USSR.

Synthesis of derivatives of p-alkoxybenzoic acids. IV. Some derivatives of α,ω-alkylenebis-p-hydroxybenzoic acids. A. L. Mndzhoyan, O. L. Mndzhoyan, and N. A. Babiyan. Doklady Akad. Nauk Armyan. S.S.R. 18, 105-8 (in Russian; Armenian summary, 109-10)(1954); cf. C.A. 49, 5858i.—The following substances were prepd. for studies of curare activity. The descriptions of the synthesis and the biochem. results are not given. $(CH_2)_n(OC_6H_4CO_2R\text{-}p)_2$, n and R, yield, and b.p. or m.p. (stated without indication of which is meant in each case) shown: 1, Et, 50.7%, —, 98-100°; 1, $Me_2NCH_2CH_2$, 50%, undistillable liquid (HCl salt, m. 212°, oxalate, m. 194-5°, methiodide, m. 72-6°, ethiodide, m. 132-6°); 1, $Et_2NCH_2CH_2$, undistillable liquid, 43% (oxalate, m. 153-6°, methiodide, m. 125-8°, ethiodide, m. 84-5°); 2, Et, 25%, 106-7°; 2, $Me_2NCH_2CH_2$, 60%, 81-2° (HCl salt, m. 257-8°, oxalate, m. 233-4°, methiodide, m. 247-9°, ethiodide, m. 220-1°); 2, $Et_2NCH_2CH_2$, 50%, 56-7° (HCl salt, m. 218-20°, oxalate, m. 177-9°, methiodide, m. 139-40°, ethiodide, m. 213-15°); 3, Et, 52.2%, 109-10°; 3, $Me_2NCH_2CH_2$, 50%, 78-9° (HCl salt, m. 168-71°, oxalate, m. 158-62°, methiodide, m. 217-18°, ethiodide, m. 177-82°); 3, $Et_2NCH_2CH_2$, 56%, 50-1° (oxalate, m. 139-41°, methiodide, m. 113-15°, ethiodide, m. 105-7°); 4, Et, 50%, 97-9°; 4, $Me_2NCH_2CH_2$, 45%, 58-9° (HCl salt, m. 202-3°, oxalate, m. 154-6°, methiodide, m. 236-8°, ethiodide, m. 203-5°); 4, $Et_2NCH_2CH_2$, 40%, 45-6° (HCl salt, m. 209-12°, oxalate, m. 224-5°, methiodide, m. 181-2°, ethiodide, m. 174-9°).

G. M. Kosolapoff

MANDZHOYAN, A. L.

USSR.

Synthesis of derivatives of benzimidazole. I. Some 2-(*p*-alkoxyphenyl, *p*-alkoxybenzyl, and *p*-alkoxyphenylethyl)benzimidazoles. A. L. Mndzhoyan, V. G. Afrikyan, A. N. Oganesyan, and M. T. Tiratsuyan. *Doklady Akad. Nauk Armyan. S.S.R.* 18, 111-17(In Russian; Armenian summary, 117-18)(1954).—The following substances were prepd. without details of synthesis in the present paper (% yield, m.p. and m.p. of HCl salt given): benzimidazole, (I) 86.9, 171-2°, 113°; *2-p-tolyl-I*, 63.8, 280-1°, 306°; *2-p-anisyl-I*, 71.4, 259-60°, 256-6°; *2-p-phenetyl-I*, 84.1, 263-4°, 253-4°; *2-p-propoxyphenyl-I*, 81.3, 265-6°, 275-6°; *2-p-isopropoxyphenyl-I*, 41.3, 260-1°, 273-4°; *2-p-butoxyphenyl-I*, 38.2, 276-6°, 277-8°; *2-p-isobutoxyphenyl-I*, 36.6, 274°, 280-1°; *2-methyl-I*, 75.2, 176°, 293°; *2-benzyl-I*, 95.6, 167°, 92-4°; *2-p-methoxybenzyl-I*, 80.4, 271-2°, 260-1°; *2-p-ethoxybenzyl-I*, 79.4, 274-5°, 202-4°; *2-p-propoxybenzyl-I* (III), 75.8, 239-40°, 242-3°; *2-p-isopropoxybenzyl-I*, (II), 70.2, 227-8°, 246-8°; *2-p-butoxybenzyl-I*, 69.8, 246-7°, 234-1°; *2-p-isobutoxybenzyl-I*, 68.5, 223-4°, 274-5°; *2-ethyl-I*, 81.6, 171°, 240°; *2-phenethyl-I*, 89.8, 189-90°, 269-70°; *2-p-anisylethyl-I*, 83.7, 230-1°, 262-3°; *2-p-phenethylethyl-I*, 76.8, 209-10°, 276-7°; *2-p-propoxyphenethyl-I*, 73.9, 177-8°, 280-1°; *2-p-isopropoxyphenethyl-I*, 69.6, 144-5°, 269-70°, *2-p-butoxyphenethyl-I*, 72.1, 221-2°, 284-5°; *2-p-isobutoxyphenethyl-I*, 68.5, 174-5°, 279-80°. The most effective substances in this group in their ability to block the acetylcholine contractions of frog gastric muscle are: II and III. Phenethyl derivs. are less effective, and the PI derivs. are least effective. G. M. Kosolapoff

CH (3)

Synthesis of derivatives of dibasic carboxylic acids. IV. Derivatives of adipic acid. A. L. Mndzhoyan, O. L. Mndzhoyan, and O. E. Gasparyan. *Doklady Akad. Nauk Armyan. S.S.R.* 18, 129–32(in Russian; Armenian summary, 132–3)(1954); cf. *C.A.* 49, 12209d.—The following $(CH_2CH_2CO_2R)_2$ were prepd. for biological tests, without exptl. details being given. (*R*, % yield, b.p., d_4^{20}, n_D^{20}, m.p. HCl salt, m.p. oxalate, m.p. methodide, m.p. ethiodide given): $Me_2NCH_2CH_2$, 63.5, b_1 153°, 1.0005, 1.4505, 190°, 180°, 126–7°, 113–14°; $Et_2NCH_2CH_2$, 34.5, b_2 185°, 0.9789, 1.4505, 102°, 135°, 122°, 171°; $Me_2NCH_2CH_2CHMe$, 71, b_1 160–1°, 0.9675, 1.4503, 177–8°, 158°, 207°, 138–40°; $Et_2NCH_2CH_2CHMe$, 50, b_1 215°, 0.9476, 1.4543, —, 89–90°, 161–2°, 152–3°; $Me_2NCH_2CMe_2CH_2$, 50, b_2 181°, 0.9623, 1.4521, —, 117–19°, 230°, 166°; $Et_2NCH_2CMe_2CH_2$, 56.6, $b_{0.4}$ 104°, 0.9461, 1.4515, —, —, 150–1°, —; $Me_2NCH_2CHMeCHMe$, 70, b_1 173°, 0.9524, 1.4498, 177–8°, 135–6°, 183–4°, —; $Et_2NCH_2CHMeCHMe$, 51.4, b_1 193°, 0.9376, 1.4535, —, —, —, m. 131–2° (citrate, m. 69–71°).

V. Derivatives of pimelic acid. *Ibid.* 19, 19–21 (in Russian; in Armenian, 21–2).—The following esters of pimelic acid were prepd. for biochem. tests. $CH_2(CH_2CH_2CO_2R)_2$ (R, % yield, b.p., d_4^{20}, n_D^{20}, and m.p. of the oxalate given): $Me_2NCH_2CH_2$, 84, b_2 168°, 0.9921, 1.4497, 160°; $Et_2NCH_2CH_2$, 60, b_1 175–6°, 0.9690, 1.4535, 123–3°; $Me_2NCH_2CH_2CHMe$, 52.5, b_1 171°, 0.9593, 1.4507, 140–1°; $Et_2NCH_2CH_2CHMe$, 71.1, b_1 203–4°, 0.9393, 1.4516, oil; $Me_2NCH_2CMe_2CH_2$, 74, b_1 178°, 0.9480, 1.4495, 104–5°; $Et_2NCH_2CMe_2CH_2$, 46.7, b_1 195°, 0.9364, 1.4543, oil; $Me_2NCH_2CHMeCHMe$, 51.4, b_1 175–6°, 0.9509, 1.4563, 126–7°; $Et_2NCH_2CHMeCHMe$, 62.1, b_1 195–6°, 0.9393, 1.4507, oil.

VI. Mixed ethyl, dialkylaminoethyl esters of some dibasic carboxylic acids. A. L. Mndzhoyan, O. L. Mndzhoyan, and N. A. Habiyan. *Ibid.* 93–6(in Russian)(Armenian summary 95–6).—The following esters were prepd. for physiological tests. $EtO_2C(CH_2)_nCO_2CH_2CH_2NR_2$ (*R*, n, % yield, b.p., d_4^{20}, n_D^{20}, m.p. *HCl salt*, m.p. *oxalate*, m.p. *methiodide*, m.p. *ethiodide*, resp. shown): *Me*, 3, 39.2, b_2 135–7°, 1.0322, 1.4399, —, 95–6°, 57–8°, —; *Et*, 3, 71.4, b_2 155–7°, 0.9978, 1.435, —, 54–7°, —, 71–3°; *Me*, 4, 60, b_2 140–51°, 1.017, 1.434, 88–93°, 120–2°, 52–4°, 60–2°; *Et*, 4, 50, b_2 175–8°, 0.988, 1.4399, 59–63°, 64–7°, —, 78–81°; *Me*, 5, 68.7, b_1 145–7°, 0.9984, 1.4342, —, 102–3°, 45–7°, —; *Et*, 5, 73.1, $b_{0.4}$ 148–9°, 0.993, 1.437, —, 67–70°, —, —; *Me*, 6, 58.1, $b_{0.4}$ 143°, 0.9884, 1.4377, —, 109–10°, 87–9°, —; *Et*, 6, 55.5, $b_{0.4}$ 170–3°, 0.9054, 1.4367, —, —, —, 85–7°; *Me*, 7, 58, $b_{0.4}$ 154–5°, 0.983, 1.438, —, 107–10°, 85–7°, —; *Et*, 7, 65, $b_{0.4}$ 188–90°, 0.972, 1.439, 59–63°, 77–80°, —, 83–92°; *Me*, 8, 50, $b_{0.4}$ 175–8°, 0.9671, 1.437, 63–7°, 69–72°, 107–10°, 52–4°; *Et*, 8, 35, $b_{0.4}$ 180–4°, 0.9599, 1.443, 74–7°, 84–8°, 54–5°, 101–4°.

VII. Dialkylaminoethyl esters of some thiocarboxylic acids. A. L. Mndzhoyan and S. G. Aghalyan. *Ibid.* 111–15(in Russian; Armenian summary, 115–16).—The following were prepd. for biol. tests, without further details of prepn. (% yield, b.p., d_4^{20}, and n_D^{20} given): $S(CH_2CO_2CH_2CH_2NMe_2)_2$, 12.1, b_3 177–8°, 1.0395, 1.4730 (*oxalate*, m. 116°; *methiodide*, m. 189°; *ethiodide*, m. 134°); $S(CH_2CO_2CH_2CH_2NEt_2)_2$, b_2 195°, 14.8, 1.0399, 1.4731 (*oxalate*, m. 139°); $S(CH_2CH_2CO_2CH_2CH_2NMe_2)_2$, 59.9, b_2 140–2°, 1.0756, 1.4848 (*oxalate*, m. 127°); $S(CH_2CH_2CO_2CH_2CH_2NEt_2)_2$, 64.5, b_3 185–7°, 1.0128, 1.4850 (*oxalate*, m. 111°); $S(CHEtCO_2CH_2CH_2NMe_2)_2$, 53.3, b_2 178°, 1.0268, 1.4568 (*oxalate*, m. 132°;

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methiodide, m. 144°); $S(CH_2CO_2CH_2CH_2NEt_2)_2$, 59.4, b_3 203–4°, 1.0137, 1.4780 (*oxalate*, m. 145°); $S(CH(CHMe_2)CO_2CH_2CH_2NMe_2)_2$, 57.9, b. 223°, 1.0390, 1.4712 (*oxalate*, m. 168°); $S(CH(CHMe_2)CO_2CH_2CH_2NEt_2)_2$, 63.8, b_3 175°, 0.9931, 1.4470 (*oxalate*, m. 114°). VIII. Derivatives of suberic acid. A. L. Mndzhoyan, O. L. Mndzhoyan, and O. E. Gasparyan. *Ibid.* 143–6(in Russian; Armenian summary, 146–7).—The following compds. were prepd. for biol. evaluation; all had lobelinelike irritating action on the respiratory centers. $RO_2C(CH_2)_6CO_2R$ (*R*, % yield, b.p., d_4^{20}, n_D^{20}, and m.p. of its *oxalate* given): $Me_2NCH_2CH_2$, 86.6, b_1 165°, 0.9801, 1.4493, 130°; $Et_2NCH_2CH_2$, 57, b_1 190°, 0.9668, 1.4522, 129–30°; $Me_2NCH_2CH_2CHMe$, 62.5, b_1 178°, 0.9503, 1.4537, 123–4°; $Et_2NCH_2CH_2CHMe$, 40, b_1 195–6°, 0.9420, 1.4540, —; $Me_2NCH_2CMe_2CH_2$, 52.8, b_1 175–6°, 0.9502, 1.4530, 115–16°; $Et_2NCH_2CMe_2CH_2$, 47.8, b_1 188°, 0.9336, 1.4542, —; $Me_2NCH_2CHMeCHMe$, 62.5, b_1 191°, 0.9421, 1.4504, 129–30°; $Et_2NCH_2CHMeCHMe$, 54.4, b_1 210°, 0.9252, 1.4517, —.

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Synthesis of derivatives of ρ-alkoxybenzoic acids. V. Aminoalkyl esters of ρ-methylmercaptoethoxybenzoic acid and their quaternary salts. A. L. Mndzhoyan and M. T. Grigoryan. *Doklady Akad. Nauk Armyan. S.S.R.* 18, 135–9(in Russian; Armenian summary, 139–40)(1954); cf. *C.A.* 49, 10886k.—The following ρ-MeSCH$_2$CH$_2$OC$_6$H$_4$CO$_2$R were prepd. for biological tests without preparative details (R, % yield, b.p., d_{20}, n_D^{20}, m.p. HCl salt, m.p. picrate given): $Me_2NCH_2CH_2$, 92, b_2 205–6°, 1.1085, 1.5426, 153–4°, 96–7°; $Et_2NCH_2CH_2$, 83, b_2 256–7°, 1.0797, 1.5345, 108°, 132–3°; $Me_2N(CH_2)_3$, 64.7, $b_{2.5}$ 217–18°, 1.0939, 1.5376, 148–9°, 95–6°; $Et_2N(CH_2)_3$, 65.7, b_2 220–1°, 1.0075, 1.5319, 78–80°; $Me_2NCH_2CH(CH_2)CHMe$, 76.3, b_2 211–12°, 1.0757, 1.5323, 98–9°; $Et_2NCH_2CH(CH_2)CHMe$, 62, b_2 223–4°, 1.0651, 1.5267, 77–8°; $Me_2NCH_2CHMeCHMe$, 82.4, b_2 220–1°, 1.0650, 1.5293, 72–4°; $Et_2NCH_2CHMeCHMe$, 68, b_2 220–1°, 1.0431, 1.5222, —, 82–3°; $Me_2NCH_2CMe_2CH_2$, 67.7, b_2 207–8°, 1.0614, 1.5276, 61–3°, 90–1°; $Et_2NCH_2CMe_2CH_2$, 53.5, b_2 223–4°, 1.0462, 1.5236, —, —; $Me_2NCH_2CH(CH_2NMe_2)$, 67.8, b_2 221–2°, 1.0735, 1.5319, 150–60°, 170–80°; $Et_2NCH_2CH(CH_2NEt_2)$, 75.4, b_2 236–7°, 1.0300, 1.5220, —, 110–120°. The following quaternary salts $MeSCH_2CH_2OC_6H_4CO_2ZNR_3'R''I$ (iodide) are reported (Z, R', R'', m.p. shown resp.): CH_2-CH_2, *Me*, *Me*, 102° (95% yield); CH_2CH_2, *Me*, *Et*, 123°; CH_2CH_2, *Et*, *Me*, 112–13°; CH_2CH_2, *Et*, *Et*, 88–90°; $CHMeCH_2CH_2$, *Me*, *Me*, 108°; CH_2CH_2, *Me*, *Me*, 109–10°; $CHMeCH_2CH_2$, *Me*, *Et*, 108°; $CH_2CMe_2CH_2$, *Me*, *Me*, 116–17°; $CH(CH_2NR'R'')CH_2$, *Me*, *Me*, 110–11°. VII. Amino esters of ρ-(2-methoxyethoxy)benzoic acid and their quaternary salts. A. L. Mndzhoyan, V. G. Afrikyan, and A. A. Dokhikyan. *Ibid.* 19, 85–90(in Russian)(Armenian summary 90–1).—The following compds. were prepd. by unidescribed procedures for physiological tests. ρ-$MeOCH_2CH_2OC_6H_4CO_2R'$ (R, % yield, b.p., d_{20}, n_D^{20}, m.p. HCl salt, m.p. picrate, given): $Me_2NCH_2CH_2$, 76.4, b_{11} 173–4°, 1.0602, 1.5152, 116–17°, 153–4°; $Et_2NCH_2CH_2$, 73.3, b_{11} 178–9°, 1.0414, 1.5008, 102–3°, 101–2°; $Me_2NCH_2CH_2CHMe$, —, b_{12} 180–1°, 1.0372, 1.5065, —, 92–3°; $Et_2NCH_2CH_2CHMe$, 81.7, b_{12} 100–1°, 1.0160, 1.5024, —, 99–100°; $Me_2NCH_2CHMeCHMe$, 64.5, b_{10} 208–9°, 1.0448, 1.5059, —, —; $Et_2NCH_2CHMeCHMe$, 70, b_{12} 217–18°, 1.0221, 1.5019, —, —; $Me_2NCH_2CMe_2CH_2$, 74.2, b_{10} 201–2°, 1.0402, 1.5045, 77°, 141°; $Et_2NCH_2CMe_2CH_2$, 71.8, b_{12} 212–13°, 1.0212, 1.5023, 82°, 131°. The following quaternary salts are listed ρ-$MeOCH_2CH_2OC_6H_4CO_2XNR_3'RI$ (X, R' and R, resp. shown): CH_2CH_2, *Me*, *Me*, m. 174–5°; CH_2CH_2, *Me*, *Et*, m. 172–3°; CH_2CH_2, *Et*, *Me*, m. 107–8°; CH_2CH_2, *Et*, *Et*, m. 114–15°; $CHMeCH_2CH_2$, *Me*, *Me*, m. 123–4°; $CHMeCH_2CH_2$, *Me*, *Et*, m. 114–15°; $CHMeCH_2CH_2$, *Et*, *Me*, m. 82–3°; $CHMeCH_2CH_2$, *Et*, *Et*, m. 140–1°; $CH_2CMe_2CH_2$, *Me*, *Et*, m. 115–16°; $CH_2CMe_2CH_2$, *Me*, *Me*, m. 119–20°; $CH_2CMe_2CH_2$, *Et*, *Me*, m. 82–3°; $CH_2CMe_2CH_2$, *Et*, *Et*, m. 137–8°. VIII. β,β-Dimethyl-γ-dialkylamino-

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propyl esters of *p*-(2-alkoxyethoxy)benzoic acids and their quaternary salts. A. L. Mndzhoyan, V. G. Afrikyan, and G. L. Papayan. *Ibid.* 105-9(in Russian; Armenian summary)—The following compds. were prepd. for biol. evaluation; no details of the prepn. are given. *p*-$ROCH_2CH_2OC_6H_4CO_2CH_2CHMeCH_2NMe_2$ (*R*, % yield, b.p., d_{20}, n_D^{20}, m.p. of the *HCl salt*, and m.p. of the *picrate* given): *Me*, 74.2, b_{12} 201-2°, 1.0402, 1.5046, 77°, 141°; *Et*, 77.6, b_{12} 105-6°, 1.0264, 1.5011, 87°, 127.5-8°; *Pr*, 77.8, b_{12} 233-4°, 1.0134, 1.4975, 52-3°, 120-1°; *iso-Pr*, 55.6, b_{12} 199-200°, 1.0116, 1.4952, —, —; *Bu*, 82.1, b_{12} 220-1°, 1.0101, 1.4965, 40-7°, 127-8°; *iso-Bu*, 77.2, b_{12} 210-11°, 1.0025, 1.4929, 40-50°, —; *Am*, 75.6, b_{12} 189-90°, 1.0036, 1.4978, 71-6°, 142-3°; *iso-Am*, 73.4, b_{12} 206-7°, 1.0002, 1.4947, —, —. *p*-$ROCH_2CH_2OC_6H_4CO_2CH_2CMeCH_2NEt_2$ (same notation as above): *Me*, 71.8, b_{12} 212-13°, 1.0212, 1.5023, 82°, 131°; *Et*, 65.3, b_{12} 208-7°, 1.0145, 1.4995, 46-7°, 86-7°; *Pr*, 70.4, b_{12} 213-14°, 1.0022, 1.4950, 45-6°, 69-70°; *iso-Pr*, 54.3, b_{12} 228-9°, 0.9965, 1.4932, —, —; *Bu*, 76.7, b_{12} 233-4°, 0.9944, 1.4942, —, 95-6°; *iso-Bu*, 70.8, b_{12} 220-1°, 0.9865, 1.4901, 59-60°, —; *Am*, 71.2, b_{12} 200-1°, 0.9933, 1.4954, 120-1°, 129-30°; *iso-Am*, 70.7, b_{12} 222-3°, 0.9837, 1.4945, —, —. *p*-$ROCH_2CH_2OC_6H_4CO_2CH_2CMeCH_2NR_2'R''I$ (*R*, *R'*, *R''*, % yield, and m.p. given): *Me*, *Me*, *Me*, 97.9, 119-20°; *Me*, *Me*, *Et*, 96.5, 82-3°; *Me*, *Et*, *Me*, 92.2, 115-16°; *Me*, *Et*, *Et*, 91.1, 137-8°; *Et*, *Me*, *Me*, 95.2, 116-17°; *Pr*, *Me*, *Me*, 94.5, 89-90°; *iso-Pr*, *Me*, *Me*, 90.0, 98-100°; *Bu*, *Me*, *Me*, 92.7, 105-6°; *iso-Bu*, *Me*, *Me*, 93.1, 124-5°; *iso-Bu*, *Me*, *Et*, 88.5, 86-7°; *Am*, *Me*, *Me*, 91.8, 144-5°; *iso-Am*, *Me*, *Me*, 91.8, 89-90°. IX. α,β-Dimethyl-γ-dialkylaminopropyl esters of *p*-(β-alkoxyethyloxy)benzoic acids and their quaternary salts. *Ibid.* 137-41 (in Russian; Armenian summary 141-2).—The following esters were prepd. for biol. evaluation. *p*-$ROCH_2CH_2OC_6H_4CO_2CHMeCHMeCH_2NMe_2$ (*R*, yield, b.p., d_{20}, and n_D^{20} given): *Me*, 64.5, b_{12} 208-9°, 1.0443, 1.5059; *Et*, 90, b_{12} 184-5°, 1.0256, 1.5000; *Pr*, 64.4, b_{12} 201-2°, 1.016, 1.4983; *iso-Pr*, 63.8, b_{12} 200-10°, 1.0142, 1.4962; *Bu*, 81.3, b_{12} 218-19°, 1.0084, 1.4964; *iso-Bu*, 73.5, b_{12} 188-9°, 1.0027, 1.4935; *Am*, 70.3, b_{12} 210-11°, 1.0063, 1.4979; *iso-Am*, 64, b_{12} 203-4°, 0.9988, 1.4943; *p*-$ROCH_2CH_2OC_6H_4CO_2CHMeCHMeCH_2NEt_2$ (same notation): *Me*, 70, b_{12} 217-18°, 1.0221, 1.5019; *Pr*, 66.6, b_{12} 213-14°, 0.9993, 1.4952; *Et*, 85.2, b_{12} 193-4°, 1.0095, 1.4968; *iso-Pr*, 50.1, b_{12} 228-9°, 0.9947, 1.4928; *Bu*, 76.5, b_{12} 222-3°, 0.9950, 1.4936; *iso-Bu*, 75.7, b_{12} 199-200°, 0.9882, 1.4910; *Am*, 70.3, b_{12} 221-2°, 0.9894, 1.4950; *iso-Am*, 66.7, b_{12} 212-13°, 0.9862, 1.4918. *p*-$ROCH_2CH_2OC_6H_4CO_2CHMeCHMeCH_2NR_2'R''I$ (*R*, *R'*, *R''*, yield, m.p. shown resp.): *Me*, *Me*, *Me*, 89.5, 114-15°; *Me*, *Et*, *Et*, 80.9, 85-6°; *Et*, *Et*, *Et*, 82.3, 79-80°; *Pr*, *Me*, *Et*, 81.5, 90-1°; *iso-Bu*, *Me*, *Me*, 88.7, 94-5°; *Am*, *Me*, *Me*, 85.5, 88-9°; *Am*, *Me*, *Et*, 79.4, 74-5°; *iso-Am*, *Me*, *Me*, 90.1, 86-7°. G. M. Kosolapoff

MNDZHOYAN, A.L.; MNDZHOYAN, O.L.; GASPARYAN, O.Ye.

Investigations on derived dibasic carboxylic acids. Dokl. AN Arm. SSR 19 no.1:19-22 '54. (MIRA 8:7)

1. Deystvitel'nyy chlen Akademii nauk Armyanskoy SSR. (for Mndzhoyan, A.L.)
2. Laboratoriya farmatsevticheskoy khimii Akademii nauk Armyanskoy SSR. (Carboxylic acid)

MNDZHOYAN, A.L.

Synthesis of derivatives of p-alkoxybenzoic acids. VI. γ-Dialkylaminopropyl esters of p-alkoxythiobenzoic acids and some of their salts. A. L. Mndzhoyan and E. R. Hasdasaryan. *Doklady Akad. Nauk Armyan. S.S.R.* 19, 47–52(in Russian; Armenian summary, 52)(1954); cf. *C.A.* 50, 245a.—The following $Me_2NCH_2CH_2CH_2SC(O)C_6H_4OR$-*p* are reported without description of the methods of synthesis (*R*, % yield, b.p., d_{20}, n_D^{20}, and m.p. of picrate): *Me*, 86.6, $b_{0.6}$ 182–5°, 1.0082, 1.5618, 138–9°; *Et*, 85.3, b_6 195–8°, 1.0703, 1.5522, 122–3°; *Pr*, 75, $b_{0.6}$ 200–3°, 1.0623, —, 126–8°; *Bu*, 70.2, b_6 205–10°, —, —, 129–30°; *Am*, 86, $b_{0.6}$ 203–6°, 1.0316, 1.5395, 123–4°; *iso-Pr*, 83.25, b_5 188–90°, 1.0334, 1.[illegible], 116–18°; *iso-Bu*, 79.9, b_1 210–18°, 1.0416, 1.5395, 12[illegible]; *iso-Am*, 87.7, b_1 202–4°, 1.0398, 1.5418, 107–9°. $Et_2N(CH_2)_2CH_2CH_2SC(O)C_6H_4OR$-*p* (as above): *Me*, 77, $b_{0.6}$ 196–[illegible], 1.0527, 1.5164, 115–16°; *Et*, 87.5, $b_{0.6}$ 198–200°, 1.0246, 1.5413, 110–11°; *Pr*, 80, $b_{0.6}$ 205–8°, 1.008, 1.5188, 105–6°; *Bu*, 81.1, $b_{0.6}$ 258–63°, 1.0114, 1.5316, 82–3°; *Am*, 80, $b_{0.6}$ 215–20°, 1.0031, 1.5268, 95–6°; *iso-Pr*, 83.4, $b_{0.6}$ 186–8°, 1.0214, 1.5356, 103–4°; *iso-Bu*, 80.1, $b_{0.6}$ 193–6°, 1.0095, 1.5278, 73–4°; *iso-Am*, 70.1, $b_{0.6}$ 199–204°, 0.9935, 1.5221, 87–8°. The following *HCl salts*, *p*-$ROC_6H_4C(O)SCH_2CH_2CH_2NR_2'.HCl$ were obtained in 90.5–99% yield (*R*, *R'*, and m.p. given): *Me*, *Me*, 156–7°; *Me*, *Et*, 127–8°; *Et*, *Me*, 138–9°; *Et*, *Et*, 143–4°; *Pr*, *Me*, 115–16°; *Pr*, *Et*, 99–100°; *Bu*, *Me*, 141–2°; *Bu*, *Et*, 92–3°; *Am*, *Me*, 123–4°; *Am*, *Et*, 80–1°; *iso-Pr*, *Me*, 93–4°; *iso-Pr*, *Et*, 101–2°; *iso-Bu*, *Me*, 140–1°; *iso-Bu*, *Et*, 85–6°; *iso-Am*, *Me*, 105–6°; *iso-Am*, *Et*, 86–7°. Following methiodides *p*-$ROC_6H_4C(O)SCH_2CH_2CH_2NR_2'MeI$ (*R*, *R'*, and m.p. given) are reported in 80–96% yield: *Me*, *Me*, 180–1°; *Me*, *Et*, 123–4°; *Et*, *Me*, 176–7°; *Et*, *Et*, 93–4°; *Pr*, *Me*, 175–6°; *Pr*, *Et*, 91–2°; *Bu*, *Me*, 163–4°; *Bu*, *Et*, 76–7°; *Am*, *Me*, 142–3°; *Am*, *Et*, 80–1°; *iso-Pr*, *Me*, 127–8°; *iso-Pr*, *Et*, 111–12°; *iso-Bu*, *Me*, 177–8°; *iso-Bu*, *Et*, —; *iso-Am*, *Me*, 134–5°; *iso-Am*, *Et*, —. G. M. K.

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MNDZHOYAN, A.L.; AFRIKYAN, V.G.; DOKHIKYAN, A.A.

Investigation on the synthesis of derived p-alkoxy benzoic acids.
Dokl. AN Arm. SSR. 19 no.3:85-91 '54. (MLRA 8:7)

1. Deystvitel'nyy chlen Akademii nauk Armyanskoy SSR. (for Mndzhoyan)
2. Laboratoriya farmaticheskoy khimii Akademii nauk Armyanskoy SSR.
(Benzoic acid)

MNDZHOYAN, A.L.; MNDZHOYAN, O.L.; BABIYAN, N.A.

Investigation on the synthesis of derived dibasic carboxylic acids.
Dokl. AN Arm. SSR 19 no.3:93-96 '54. (MLRA 8:7)

1. Deystvitel'nyy chlen Akademii nauk Armyanskoy SSR. (for Mndzhoyan, A.L.)
2. Laboratoriya farmatsevticheskoy khimii Akademii nauk Armyanskoy SSR.
(Carboxylic acid)

MNDZHOYAN, A.L.; AFRIKYAN, V.G.; PAPAYAN, G.L.

Investigation on the synthesis of derived p-alkoxy benzoic acids.
Dokl. AN Arm. SSR 19 no.4:105-109 '54. (MLRA 8:7)

1. Deystvitel'nyy chlen Akademii nauk Armyanskoy SSR. (for Mndzhoyan).
2. Laboratoriya farmatsevticheskoy khimii Akademii nauk Armyanskoy SSR.