"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PREOBRAZHENSKIY, N. A.

"The method of preventing reankylosis of the stirrup."

report submitted for the Seventh Intl. Congress of Otorhinolaryngology, Paris, 23-29 July 1961

Moscow, USSR

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

LIKHACHEV, A.G., zasluzhennyy deyatel' nauki, prof.; PREOBRAZHENSKIY, N.A., kand.med.nauk; RIMAN, I.B.

Anesthesia in operations on the stapes. Vest.otorin. no.3:43-50 '62. (MIRA 16:3)

1. Iz kliniki bolezney ukha, gorla i nosa (dir. - zasluzhennyy deyatel' nauki prof. A.G. Likhachev) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.
(TYMPANAL ORGAN--SURGERY) (OTOSCLEROSIS)
(LOCAL ANESTHESIA)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PREOBRAZHENSKIY, N.A., kand.med.nauk

Sound-ruler for measuring the length of the prosthesis in stapes surgery. Vest.otorin. no.5:75-76 '62. (MIRA 15:9)

1. Iz kliniki bolezney ukha, nosa i gorla (dir. - zasluzhennyy deyatel nauki prof. A.G. Likhachev) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.
(TYMPANAL ORGAN--SURGERY)
(OTORHINOLARYNGOLOGY--EQUIPMENT AND SUPPLIES)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PREOBRAZHENSKIY, N.A., kand.med.nauk

Methods to prevent refixation of the stapes. Zhur.ush.,nos.i gorl.bol. 22 no.4:34-36 Jl-Ag '62. (MIRA 16:2)

1. Iz kliniki bolezney ukha, gorla i nosa (dir. - zasluzhennyy deyatel' nauki prof. A.G. Likhachev) 1-go Moskovskogo meditsinskogo instituta.

(TYMPANAL ORGAN--SURGERY)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

KHILOV, Konstantin L'vovich; PREOBRAZHENSKIY, Nikolay Aleksandrovich; IVANOV, N.I., red.

[Otosclerosis] Otoskleroz. Izd.2., ispr. i dop. Leningrad, Meditsina, 1965. 237 p. (MIRA 18:2)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

KRAYEVSKIY, A.A.; PREOBRAZHENSKIY, N.A.

Study of the higher acids of the aliphatic series. Part 15: Synthesis of cis=, cis=, cis=9,12,15-octadecatrienoic (linolenic) acid. Zhur. ob. khim. 35 no.4:618-619 Ap '65.

(MIRA 18 5)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

ZVONKOVA, Ye.N.; TSETLIN, V.I.; SARYCHEVA, I.K.; PREOBRAZHENSKIY, N.A.

Lipids. Part 27: Synthesis of α, and β-chimyldipalmitates. Zhur. org. khim. 1 no.4:630-634 Ap '65. (MIRA 18:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

ZINKEVICH, E.P.; TREBOGANOV, A.D.; MINTSNER, B.I.; KRAYEVSKIY, A.A.; SARYCHEVA, I.K.; PREOBRAZHENSKIY, N.A.

Macrocyclic compounds. Part 2: Synthesis of cyclooctanone and cyclododecanone. Zhur. org. khim. 1 no.9:1587-1590 S '65. (MIRA 18:12)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova. Submitted July 8, 1964.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PONOMAREV, G.V.; YEVSTIGNEYEVA, R.P.; MIRONOV, A.F.; PREOBRAZHENSKIY, N.A.

Biosynthesis of 6-azauridine in Escherichia coli and the conditions of accumulation of orotidine. Vop.med.khim. 11 no.6:47-54 N-D '65. (MIRA 18:12)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova. Submitted April 16, 1964.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

MYAGKOVA, G.I.; KRAYEVSKIY, A.A.; PYATNOVA, Yu.B.; SARYCHEVA, I.K.; PREOBRAZHENSKIY, N.A.

Higher fatty acids. Part 16: Synthesis of cis-, cis-, cis-, cis-, 9,12,15,18- tetracosatetraenoic acid. Zhur. org. khim. 1 no.6:981-983 Je '65. (MIRA 18:9)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

KLYKOV, V.N.; SEREBRENNIKOVA, G.A.; PREOBRAZHENSKIY, N.A.

Lipids. Part 26: Synthesis of several saturated triglycerides of milk fat. Zhur.org.khim. 1 no.2:253-256 F '65.

(MIRA 18:4)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V.Lomonosova.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

SKLYAR, Yu.Ye.; YEVSTIGNEYEVA, R.P.; SARALIDZE, O.D.; PREOBRAZHENSKIY, N.A.

Structure of the salts of 3-acetylpyrrole derivatives and the mechanism underlying dipyrrylmethane formation. Dokl. AN SSSR 157 no. 2:367-370 Jl '64. (MIRA 17:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova. Predstavleno akademikom A.N.Nesmeyanovym.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

BAYNOVA, M.S.; BAZILEVSKAYA, G.I.; MIROSHNICHENKO, L.D.; PREOBRAZHENSKIY, N.A.

Conformation studies in the cocaine series. Dokl. AN SSSR 157 no.3:599-602 Jl '64. (MIRA 17:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova. Predstavleno akademikom A.N. Nesmeyanovym.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PREOBRAZHENSKIY, N.

"Strengthening waterway aprons through slanting elements."

Dissertation for Candidate of Technical Sciences
Leningrad Polytechnical Inst. im. Kalinin (LPI)

Subject: Hydroengineering building and construction.

Gidrotekhnicheskoye, stroitel'stvo, 12, 1946.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PREOBRAZHENSKIY, N.A., starshiy nauchn.sotrudnik, kand. tekhn.nauk

Pressure pulsation on the bottom of a flow associated with the conjugation of head and tail water and calculation of the thickness of bed reinforcement in the tail water. Izv. VNIIG 46:129-139 '51.
(MIRA 12:5)

(Hydraulic engineering)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PREOBRAZHENSKIY, N. A.

124-1957-1-480

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 60 (USSR)

AUTHORS: Preobrazhenskiy, N.A., Yuditskiy, G.A.

TITLE: Investigation of the Pressure Pulsation Along the Walls of the Filling Conduit of a Lock Chamber (Issledovaniya pul'satsii davleniya na stenki vodoprovodnoy galerei shlyuza)

PERIODICAL: Izv. Vses. n.-i. in-ta gidrotekhn., 1955, Vol 54, pp 65-77

ABSTRACT: A description is adduced of tests for the study of the hydrodynamic pressure pulsations acting upon the wall and the valves of the filling conduit of a navigation lock chamber. Also described are tests intended for the development of methods for the alleviation of these pulsations. The test results are expressed in the form of graphical relationships between the pulsation pressures and the discharge rate. It is recommended that gratings be installed in the stop-log grooves below the valve gates.
Bibliography: 5 references P.G.Kiselev

1. Canals--Navigational locks--Hydrodynamic pressure --Analysis

Card 1/1

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

124-1957-1-482

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 61 (USSR)

AUTHORS: Kumin, D.I., Preobrazhenskiy, N.A., Yuditskiy, G.A.

TITLE: Hydrodynamic Load Pulsations on Portions of the Filling Conduit Beyond the Gate Valve (Pul'satsiya gidrodinamicheskoy nagruzki na uchastok napornoy galerei za zatvorom)

PERIODICAL: Izv. Vses. n.-i. in-ta gidrotekhn., 1955, Vol 54, pp 78-85

ABSTRACT: Deviating from the study of the pressure pulsation at a given point (ref. RzhMekh 1957, Nr 1, 480), the present paper refers to an investigation of the pressure pulsation on an isolated wall area. The investigations were performed on a model of the filling conduit of a navigation lock. The construction of the model permitted a certain freedom of vertical and horizontal displacement in order to facilitate the measurement of the pressure acting on the wall area under examination. The tests revealed that the maximum pulsation pressures are proportional to the square of the discharge.

P.G.Kiselev

1. Hydraulic conduits--Pressure--Pulsation--Analysis

Card 1/1

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

124-58-9-10227

Translation from: Referativnyy zhurnal. Mekhanika, 1958, Nr 9, p 116 (USSR)

AUTHOR: Preobrazhenskiy, N. A.

TITLE: Measuring and Control Equipment for Hydraulic Engineering Structures (Osnashcheniye gidrotekhnicheskikh sooruzheniy GES kontrol'no-izmeritel'noy apparaturoy)

PERIODICAL: Tr. 4-go nauchno-tekhn. soveshchaniya po ekspluatatsii gidroelektrost. Moscow-Leningrad, Gosenergoizdat, 1957, pp 112-117

ABSTRACT: Bibliographic entry

1. Structures 2. Hydraulic equipment--Applications

Card 1/1

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PREOBRAZHENSKIY, N.A., starshiy nauchnyy sotrudnik, kand.tekhn.nauk; OLISOV, V.A., mladshiy nauchnyy sotrudnik.

Inductive pickup for measuring pulsations of hydrodynamic pressures on structures under natural conditions. Izv.VNIIG 59:143-151 '58. (MIRA 13:7)

(Hydraulic engineering--Research)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

VOYNOVICH, P.A., starshiy nauchnyy sotrudnik, kand.tekhn.nauk; KRAVTSOV, V.I., starshiy nauchnyy sotrudnik, kand.tekhn. nauk; PREOBRAZHENSKIY, N.A., starshiy nauchnyy sotrudnik, kand.tekhn.nauk; SHVARTS, A.I., prof., doktor tekhnicheskikh nauk [deceased]

Head structures of the Upper Khariuzovskaya Hydroelectric Power Station on the Gromotukha River. Izv.VNIIG 61:31-42 '58. (MIRA 13:6)
(East Kazakhstan Province--Hydraulic power stations)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

DOROFEYEVA, L.T.; ZHAROVA, T.V.; VOLKOVA, L.V.; TOLKACHEV, O.N.; PREOBRAZHENSKIY, N.A.

Complex lipids. Synthesis of D-(--) -α-kephalins containing residues of stearic and linoleic acids. Zhur. ob. khim. 34 no.9:2935-2939 S '64. (MIRA 17:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

SHVETS, V.I.; DOROFEYEVA, L.T.; VOLKOVA, L.V.; GRUM-GRZHIMAYLO, M.A.; SHMIDT, I.S.; PREOBRAZHENSKIY, N.A.

Study of complex lipids. Paths in the synthesis of the starting substances of phospholipids. Zhur. ob. khim. 34 no.10:3303-3308 O '64. (MIRA 17:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

YEVSTIGNEYEVA, R.P.; MIRZABEKOVA, N.S.; PREOBRAZHENSKIY, N.A.

Synthesis of 2,7,12,17-tetramethyl-1,4,6,9,11,14,16,19-octaketo-cycloeicosane. Zhur. ob. khim. 34 no.10:3308-3312 O '64. (MIRA 17:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

MIRONOV, A.F.; NAUMOVA, B.S.; YEVSTIGNEYEVA, R.P.; PREOBRAZHENSKIY, N.A.

Synthesis of etioporphyrin. Zhur. ob. khim. 34 no.10:3312-3314 O '64. (MIRA 17:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

YEVSTIGNEYEVA, R.P.; L'VOVA, S.D.; PREOBRAZHENSKIY, N.A.

Synthesis of the ethyl ester of 2,7-di-(β-diethylaminoethyl)-3,8-dimethyl-4,6,9-triketocapric acid. Zhur. ob. khim. 34 no.10: 3315-3317 O '64. (MIRA 17:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PYATNOVA, Yu.B.; FEDULOVA, V.V.; SARYCHEVA, I.K.; PREOBRAZHENSKIY, N.A.

New synthesis of 5,8,11,14-eicosatetraenoic (arachidonic) acid.
Zhur. ob. khim. 34 no.10:3317-3320 O '64. (MIRA 17:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

TARUSOVA, N.B.; VETROV, A.N.; PREOBRAZHENSKIY, N.A.

Synthetic study of flavonoids. Part 5: Synthesis of eriodictyol-7-glycoside and its methyl ether. Zhur. ob. khim. 34 no.10:3300-3303 O '64. (MIRA 17:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

SHVETS, V.I.; MOROZOVA, S.F.; VOLKOVA, L.V.; [illegible], N.[illegible]

Complex lipids. Synthesis of α-(α'-lindeoyl-β-linoleoyl) glycerylphosphorylethanolamine, a cephalin. Zhur. ob. khim. 35 no.3:554-556 Mr '65. (MIRA 18:4)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

L'VOVA, S.D.; YEVSTIGNEYEVA, R.P.; PREOBRAZHENSKIY, N.A.

Synthesis of esters of α-methyl-β-(β'-carbomethoxyethyl) levulinic acid. Zhur. org. khim. 1 no.9:1555-1559 S '65. (MIRA 18:12)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova. Submitted July 17, 1964.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

L'VOVA, S.D.; YEVSTIGNEYEVA, R.P.; LAVROVA, L.N.; FILIPPOVICH, Ye.I.; PREOBRAZHENSKIY, N.A.

Claisen condensation of α-methyllevulinic acid esters. Zhur. org. khim. 1 no.9:1560-1563 S '65. (MIRA 18:12)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova. Submitted July 17, 1964.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

TREBOGANOV, A.D.; MITSNER, B.I.; ZINKEVICH, E.P.; KRAYEVSKIY, A.A.; PREOBRAZHENSKIY, N.A.

Macrocyclic compounds. Part I: Synthesis of cyclooctane and cyclododecane. Zhur. org. khim. 1 no.9:1583-1586 S '65. (MIRA 18:12)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova. Submitted July 2, 1964.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

ZINKEVICH, E.P.; SARYCHEVA, I.K.; PREOBRAZHENSKIY, N.A.

Macrocyclic compounds. Part 3: Synthesis of cyclotetra and cyclohexadecanones. Zhur. org. khim. 1 no.9:1591-1594 S '65. (MIRA 18:12)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni L.W. Lomonosova. Submitted July 20, 1964.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

CHEKMAREVA, I.B.; ZHDANOVICH, Ye.S.; REZNIK, A.I.; PREOBRAZHENSKIY, M.A.

Preparation of quinolinic and nicotinic acids. Zhur.prikl.khim. 38 no.3:707-708 Mr '65. (MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy vitaminnyy institut.
Submitted June 20, 1963.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

CHEKMAREVA, I.B.; ZHDANOVICH, Ye.S.; PREOBRAZHENSKIY, N.A.

Catalytic hydration method for the preparation of nicotinamide from nicotinonitrile. Zhur. prikl. khim. 38 no. 10:2387-2388 O '65. (MIRA 18:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy vitaminnyy institut. Submitted April 15, 1964.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

ZVONKOVA, Ye.N.; SARYCHEVA, I.V.; PREOBRAZHENSKIY, N.A.

Synthesis of neutral plasmalogens. Dokl. AN SSSR 159 no.5 1079-1082 D '64 (MIRA 18:1)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova. Predstavleno akademikom A.N. Nesmeyanovym.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

TURSIN, V.M.; CHEBOTAREVA, L.G.; FILONOVA, L.M.; POPOVA, S.M.; PREOBRAZHENSKIY, N.A.

Lipoic acid. Part 1: Synthesis of racemic lipoic acid and its derivatives. Zhur. ob. khim. 34 no.11:3662-3664 N '64 (MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy vitaminnyy institut.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

ZVONKOVA, Ye.N.; SEMENOVA, Yu.I.; GUS'KOVA, L.I.; SARYCHEVA, I.K.; PREOBRAZHENSKIY, N.A.

Lipids. Part 25: Synthesis of substituted aliphatic vinyl ethers. Zhur. ob. khim. 34 no.11:3659-366 N'64 (MIRA 18:1)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

CHEBOTAREVA, L.G.; TURSIN, V.M.; LUK'YANOVA, L.V.; PREOBRAZHENSKIY, N.A.

Lipoic acid. Part 2: Synthesis of benzhydryl ammonium salts of D,L-α-lipoyl-L-phenylalanine, -L-methionine, and -L-valine. Zhur. ob. khim. 34 no.11:3665-3667 N '64 (MIRA 18:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy vitaminnyy institut.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

L 17822-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RPL RM/JW

ACCESSION NR: AP4047649 S/0079/64/034/010/3312/3314

AUTHOR: Mironov, A. F.; Naumova, B. S.; Yevstigneyeva, R. P.; Preobrazhenskiy, N. A.

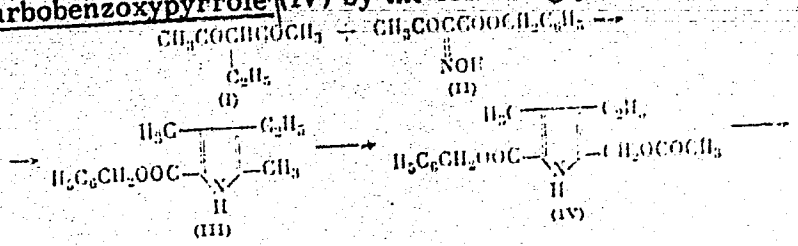
B

TITLE: Synthesis of etioporphyrin

SOURCE: Zhurnal obshchey khimii, v. 34, no. 10, 1964, 3312-3314

TOPIC TAGS: etioporphyrin, synthesis

ABSTRACT: Etioporphyrin was synthesized from 2-acetoxymethyl-3-ethyl-4-methyl-5-carbobenzoxypyrrole (IV) by the following procedure:



Card 1/3

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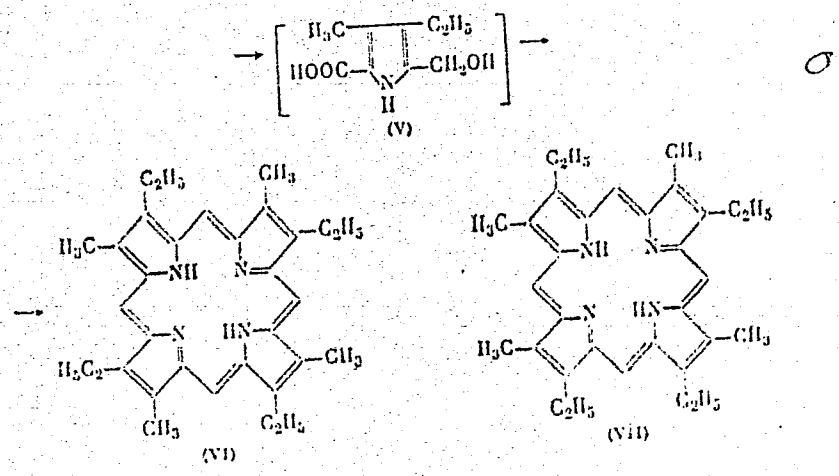
"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

L 17822-65
ACCESSION NR: AP4047649



(V)

(VI)

(VII)

III was oxidized with lead tetraacetate to IV. The latter, in acetone, alcohol or ether solution was hydrogenated with palladium catalyst to V, which was subjected

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to porphyrin condensation without separation. The reaction was effected in a 1:4 acetic acid:ethanol mixture. The product, chromatographed on Al_2O_3, was found to be etioporphyrin I (compound VI) rather than the type III isomer (compound VII). Orig. art. has: 1 set of equations.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M. V. Lomonosova (Moscow Institute of Fine Chemical Technology)

SUBMITTED: 12Jul63 ENCL: 00

SUB CODE: GC, OC NO REF SOV: 000 OTHER: 004

Card 3/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

VOLKOVA, L.V.; [illegible], [illegible].F.; PREOBRAZHENSKIY, [illegible].

Complex lipids. Synthesis of optically active [illegible] + α [illegible] β-linoleoyl-α-cephalin. Zhur. ob. khim. 35 [illegible]

1. Moskovskiy institut tonkoy khimicheskoy [illegible] Lomonosova.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

KRAYEVSKIY, A.A., SOROGOV, V.V., PREOBRAZHENSKIY, N.A.

Higher acids of aliphatic series. Part 19. Synthesis of cis-, cis-9,12-octadecadienoic (linoleic) acid. Zhur. org. khim. 1 no.1:44-46 Ja '65. (MIRA 18:5)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V.Lomonosova.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

SKLYAR, Yu.Ya.; YEVSTIGNEYEVA, R.P.; PREOBRAZHENSKIY, N.A.

Synthesis of(β,β -dicyanovinyl) pyrroles and dipyrrylmethanes. Zhur. org. khim. 1 no.1:167-171 Ja '65. (MIRA 18:6)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

MITROFANOVA, T.K.; KRAYEVSKIY, A.A.; SHKABRENNIKOVA, G.A.; KLYKOV, V.N.; ZVONKOVA, Ye.N.; ZAPESOCHNAYA, G.G.; SARYCHEVA, I.K.; PREOBRAZHENSKIY, N.A.

Complete synthesis of the glyceride base of vegetable oils and animal fats. Dokl. AN SSSR 160 no.1:133-136 Ja '65. (MIRA 18:2)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V. Lomonosova. Submitted July 4, 1964.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

L 59353-65

ACCESSION NR: AP5019332 UR/0020/64/157/003/0599/0602

AUTHOR: Baynova, M. S.; Bazilevskaya., G. I.; Miroshnichenko, L. D.; [illegible] Preobrazhenskiy, N. A.

6
B

TITLE: Conformational investigation in the cocaine series

SOURCE: AN SSSR. Doklady, v. 157, no. 3, 1964, 599-602

TOPIC TAGS: isomer, ester, IR spectrum

ABSTRACT: The infrared adsorption spectra of four stereoisomeric methyl esters of ecgonin, differing in the configuration of the substituents in the 2- and 3-positions, were studied to refine their absolute configurations. In two of these stereoisomers, the OH group forms an intramolecular hydrogen bond with the neighboring carbomethoxy group; a cis-configuration is the most favorable for the appearance of an intramolecular hydrogen bridge. In the other two isomers, the hydroxyl group is included in an intermolecular hydrogen bond, which breaks down upon dilution of the solution, analogously to tropine and pseudotropine. Other features of the adsorption spectra of the isomers, in particular, the region of the valence vibrations of the C-OH

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L 59353-65

ACCESSION NR: AP5019332

bond of the hydroxyl, are compared with the spectrum of tropine. The infrared spectra of the ecgonine corresponding to the isomeric esters were also studied. They were all found to exist in the solid state in a zwitterion form. Orig. art. has: 2 figures, 7 formulas.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology)

SUBMITTED: 25Dec63 ENCL: 00 SUB CODE: OC, OP

NR REF SOV: 004 OTHER: 007 JPRS

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1ST AND 2ND ORDERS

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BC

Alkaloids obtained from jaborandi leaves; synthesis of pilocarpidine. N. A. PREOBRAJENSKI, A. M. POLJAKOVA, and V. A. PREOBRAJENSKI (Compt. rend. Acad. Sci. U.R.S.S., 1935, 3, 267—269).—*d*-Pilopic acid is converted by $SOCl_2$ into the chloroanhydride, which with CH_2N_2 affords *d*-*pilopyl diazomethyl ketone*, m.p. 106—108°; in H_2O the latter is converted by $Na_2S_2O_3$ and Ag_2O into *d*-homopilopic acid (I). This synthesis is confirmed by conversion of (I) into *d*-homopilopyl chloromethyl ketone (A., 1933, 1311) identical with material prepared from natural (I). P. G. C.

E-2

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PROCESSES AND PROPERTIES INDEX

10

ca

Synthesis of pilocarpine alkaloids. N. A. Preobrazhenskii, A. M. Polyakova and V. A. Preobrazhenskii. *Bull. acad. sci. U. R. S. S., Classe sci. math. nat., Sér. chim.* **1936**, 982-95(in German 995).- Exptl. details are given for the prepn. of various stereoisomeric pilocarpines and pilocarpidines through a series of intermediates. Two different syntheses from pilonic acid are carried out and a provisional method for the tech. syntheses of pilocarpine is advanced. From the sp. rotation of the derivs. of these series the spatial configurations of pilocarpine and isopilocarpine are proposed. C. R. Addinall

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

10

ca

Alkaloids of jaborandi leaves. X. Synthesis and isomerization of *dl*-pilocarpine. N. A. Preobrazhenskii, A. M. Polyakova and V. A. Preobrazhenskii. *Ber.* **69B**, 1835-7(1936); cf. *C. A.* **30**, 5585[4].—In the synthesis of *dl*-pilocarpine (I), rearrangements into the iso derivs. were often observed; only by maintaining certain mild conditions, carefully avoiding increases in alky. beyond a certain limit, and cutting down the reaction time as much as possible can the isomerization be avoided. Diazomethyl *dl*-pilopyl ketone, prepd. like the *d*-compd., faintly yellowish, m. 113-13.5° (85% yield). *l-Isomer*, faintly yellowish, m. 105-7° (78% yield). *Et dl-homopilopate* (84%, from the diazo ketone in abs. alc. with AgOH), $b_{0.5}$ 116-18°, d_4^{20} 1.1089, n_D 1.4568. *d-Isomer* (83.3%, from the *d* ketone), $b_{0.05}$ 106-8°, $b_{0.05}$ 116-18° (2nd pressure should probably be 0.5 mm.—Abstr.), d_4^{20} 1.1101, N_D 1.4569, $[\alpha]_D^{20}$ 64.26° in $(CHCl_3)_2$. *l-Isomer*, $b_{0.5}$ 115-17°, d_4^{20} 1.111, n_D 1.4614, $[\alpha]_D$ in $(CHCl_3)_2$ −94.33° decreasing on the following day to $[\alpha]_D^{20}$ −64.17°. *dl-Acid*, from the ester with 1:2 HCl (94% yield), m. 106-7°; its chloride with CH_2N_2 in cold ether gives 88.7% *diazomethyl dl-homopilopyl ketone*, m. 60-2°. *d-Isomer*, faintly yellow, m. 80-1°. *Chloromethyl dl-homopilopyl ketone*, from the diazo ketone with dry HCl in cold ether, m. 64-4.5°. *l-Isomer*, m. 82.5-3.5°, $[\alpha]_D^{20}$ −102.06° in $(CHCl_3)_2$. *Phthalimidomethyl dl-homopilopyl ketone* (62% from the Cl ketone with $C_6H_4(CO)_2NK$ in abs. alc.), m. 142.5-3°. *Aminomethyl ketone HCl* (67.9%, from the phthalimido compd. boiled in 1:1 HCl), m. 163-4°. The amino compd. heated on the water bath with KSCN in water gives 72% *dl-pilocarpidine-2-thiol*, m. 203-4°, oxidized in water to *dl-pilocarpidine*, m. 128-9°, which is converted by means of MeI into I, whose *nitrate*, m. 139-40°, is isomerized to *dl*-isopilocarpine nitrate, m. 134-5° (mixed m. p. with original nitrate, 105-10°) by heating 12 hrs. with Na in abs. alc., yield, almost quant.

C. A. R.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

FREDERAZHENSKIY, N. A.

"The Synthesis of the Alkaloid Philosinine," Zhur. Ob hch. Khim., 9, No. 15, 1939. Institute of Organic Chemistry of the Academy of Sciences USSR, Laboratory of Alkaloids. Received 7 Jan 1939.

[redacted] Report U-1614, 3 Jan 1952.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

A

The reaction of columbium pentoxide with hydrogen chloride. Vikt. I. Spitsyn and N. A. Preobrazhenskii. *J. Gen. Chem.* (U. S. S. R.) 10, 655-60(1940).—Evapn. of Cb_2O_5 in the HCl stream begins at 400° and proceeds rapidly at about 700°. The reaction is: $Cb_2O_5 + 6HCl \rightleftharpoons 2CbOCl_3 + 3H_2O$. The equil. const. is of the order of 10^{-10} at 600°. The equil. is easily shifted by varying the concn. of vapor. The equil. established at high temp. shifts, during cooling, in the direction of $CbOCl_3$ hydrolysis and the products of hydrolysis sep. in the following order: at 600-400° Cb_2O_5, at 300° CbO_2Cl and below 300° "white sublimate" (colloidal dispersion) of the av. compn. Cb_2O_5 67, HCl 14, H_2O 14, $CbOCl_3$ 5% and probably some CbO_2Cl. The 1st stage of hydrolysis (above 300°) consists in the formation of CbO_2Cl, and Cb_2O_5 forms as the result of side reaction. Below 300°, the hydrolysis of $CbOCl_3$ proceeds directly to Cb_2O_5. The hydrate of Cb_2O_5 absorbs about 20% (by wt. of oxide) HCl at room temp. The absorption decreases with an increase of temp. and above 300° no absorption of HCl was observed. This is explained by absorption of HCl with colloidal dispersed Cb_2O_5. Cryst. Cb_2O_5 does not absorb HCl.

A. A. Podgorny

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

COMMON ELEMENTS

MATERIALS INDEX

The reactions of columbium and its compounds with chlorine and hydrogen chloride. Vikt. I. Spitsyn and N. A. Preobrazhenskii. *J. Gen. Chem.* (U. S. S. R.) 10, 785-98(1940); cf. *C. A.* 34, 7771[1].—Addnl. exptl. data show that Cb oxides begin to react with HCl at 300-400° and with Cl at 350-700°. Metallic Cb powder reacts more energetically with Cl than with HCl at 180° and 300°, resp. The reaction of Cb powder with Cl formed $CbCl_5$ and that of Cb_2O_5 and CbO_2 gave $CbOCl_3$. In the presence of 30% charcoal the 2 oxides react with Cl and HCl at 400° to give a mixt. of $CbCl_5$ and $CbOCl_3$. $NaCbO_3$ reacts with Cl and HCl in 2 stages with the decompn. to NaCl and Cb_2O_5 and the formation of $CbCl_5$ at higher temp. (about 1000°). Cb powder with HCl gives $CbCl_4$ and $CbCl_3$ with the liberation of H. CbO_2 reacts with HCl similarly to Cb_2O_5 to give $CbOCl_3$ and its decompn. products.

Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PREOBRAZHENSKIY, N. A. and SPITSYN, V. I.

"Reaction of Niobium pentoxide with Hydrogen Chloride" 10, No. 7, 1940.

Zhur. Obshch. Khim. Lab. of Inorganic Chem. Moscow Pedagogical Inst. imeni K. Libknekht.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PREOBRAZHENSKIY, N. A. and SPITSYN, V. I.

"Chlorination of Niobium and Its Compounds," Zhur. Obshch. Khim. 10, No. 9, 1940.

Lab. of Inorganic Chemistry, Moscow State Pedagogical Inst. imeni K. Libknekht.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PREOBRAZHENSKIY, N. A.; YURYGIN, D. N.; OKUN', S. S.; SHCHUKINA, M. N.

"Splitting of the Recemic Scopolamine Into Optical Antipodes," Zhur. Obshch. Khim. 10, No. 9, 1940.

Lab. of Alkaloids, Inst. of Organic Chemistry, Academy of Sciences USSR and State Alkaloid Plant.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

10

The products of condensation of α-formyl carboxylic esters with the esters of α-halo acids. II. Carboxylation of vinylalkyl esters. M. N. Shchukina and N. A. Preobrazhenskii. *J. Gen. Chem.* (U. S. S. R.) 10, 1363-8 (1940); cf. *C. A.* 30, 1030[8].—$EtO_2CCHMeCHO$ (14 g.) was added to 2.5 g. Na in 50 cc. abs. alc. and the resulting mixt. was treated with 15 g. of CH_2ClCO_2Et. After heating in a water bath for 5 hrs. and distg. off the alc., the NaCl was dissolved in water and the $EtO_2CCMe:CHOCH_2CO_2Et$ (I) (11 g.) formed was extd. with ether and recovered in the usual way. I b_{12} 147-9°, b_{14} 153°, d_4^{20} 1.0038, n_D^{20} 1.4624, MR_D 54.36, sp. exaltation 0.692. Freshly distd. I decolorized Br water but did not color fuchsin-SO_2 and produced a mirror with Tollen's reagent only on boiling. Boiling I with water and $(CO_2H)_2$ yielded EtCHO which formed an aldol during the synthesis of the semicarbazone, yielding the aldol semicarbazone. The aq. soln. after sapon. of I contained $HOCH_2CO_2H$, identified as its hydrazide, m. 92°. The sapon. of I with NaOEt and alc.-water yielded $NaO_2CCH(CHO)Me$, identified as its Ba salt. The condensation (in similar manner) of $EtO_2CCHEtCH(CO_2Et)CHO$ (42.5 g.) with $EtCHBrCO_2Et$ (45 g.) yielded $EtO_2CCHEtC(CO_2Et):CHOCHEtCO_2Et$ (II) (42.5 g.), b_{12} 200-2°, oily liquid, decolorized Br water, produced a mirror with Tollen's reagent upon prolonged boiling. II hydrolyzed by boiling with dil. HCl yielded the hemialdehyde of ethylsuccinic acid and α-hydroxybutyric acid, m. 46°. The sapon. of II in NaOEt and alc.-water yielded a tribasic acid which split off CO_2 upon acidifying and formed $HO_2CCHEtCH:CHOCHEtCO_2H$, m. 148-50°. The dibasic acid distd. *in vacuo* partially formed $O.CO.CHEt.CH_2.CHOCHEtCO_2H$, b. 204-7°. The sapon. of $EtO_2CCH_2C(CO_2Et):CHOCHEtCO_2Et$ with NaOEt in alc.-water yielded $HO_2CCH_2CH:CHOCHEtCO_2H$, b_{14} 195-7°. A vacuum distn. of this acid yielded $O.CO.CH_2.CH_2.CHOCHEtCO_2H$. Treatment of $EtO_2CCHEtC(CO_2Et):CHOCH_2CO_2Et$ with $(CO_2H)_2$ yielded an acid, $C_6H_{10}O_5$, m. 102-3°, the titration of which disclosed that the acid had the formula $C_{16}H_{24}O_{10}$, $HO_2CCHEtCH:CHOCH_2CO_2CH(OCH_2CO_2H)CH_2CHEtCO_2H$. A. A. Podgorny

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1ST AND 2ND ORDERS

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3RD AND 4TH ORDERS

10

2a

Hess's synthesis of arecaidine and arecoline. N. A. Preobrazhenskii and L. B. Fisher. *J. Gen. Chem.* (U. S. S. R.) 11, 140-2(1941).--Arecoline, a valuable pharmaceutical, was reported to have been synthesized by a simple method from nicotinic acid by Hess and Leibbrandt (*C. A.* 13, 580). In trying to improve the procedure of H. and L., the authors found that the method does not yield the desired product and that the data given by H. and L. apply to an intermediate in their synthesis and not to arecoline. Nicotinic acid-HCl was hydrogenated in 25% H_2O soln. with a Pt catalyst at 1.5 atm. pressure to yield 70% of *hexahydronicotinic acid-HCl* (I), m. 233-4° (from EtOH). Treatment of I with an equal amt. of 35% formalin and 0.75 part of H_2O, heating till soln. occurred, followed by 2 mols. of HCO_2H and heating on a steam-bath for 15 hrs., and distn. of the H_2O *in vacuo* gave 90% of *N-methylhexahydronicotinic acid* (II), m. 176-8°. Soln. of II in 5 times its wt. of MeOH satd. with HCl and boiling for 24 hrs. yielded, on evapn. of H_2O *in vacuo* followed by neutralization by soda, 66% of the *Me ester* (III), b_{18-19} 80-2°. III.HBr m. 115-16°; III.MeI m. 194-5°. III (5.2 g.) in 20 cc. MeOH, treated with 5.2 g. Br in 15 cc. MeOH, refluxed for 2 hrs., cooled, treated with MeONa (from 1.4 g. Na), refluxed 0.5 hr., MeOH added, satd. with HCl, and refluxed for 24 hrs., yields, upon neutralization by soda and Et_2O extn., a base, b_{18} 74-6°. H. and L. give b_{17} 94°. The product gives an HCl salt and methiodide identical with those of III. Heating of III with Br in $CHCl_3$ in a sealed tube at 100° yielded II.HBr, m. 193-5°. Hess considered this to be arecaidine-HBr. However, 0.5 g. natural arecoline refluxed for 10 hrs. with 1 cc. 48% HBr in 50 cc. H_2O yields authentic arecaidine-HBr, white, m. 242-3°, entirely different from H. and L.'s supposed synthetic product.

G. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PREOBRAZENSKIJ, N. A.

"Recherche dans le domaine du synthese des composes polyeniques - analogues des cartoninoides" by Sokina, V. V., Kildiseva, O. V., and Preobrazenskij, N. A. (p 425)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1941, vol 11, no 1.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PREOBRAZENSKII, N. A.

"Synthese de l'alcaloide arecoline." by T. F. Dankova, E. A. Sidorov, and N. A. Preobrazenskii. (p 934)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1941, vol 11, no 11.

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[redacted]

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

Ca

10

The synthesis of alkyl-substituted tetrahydronaphthalenes. I. A. Solov'eva and N. A. Preobrazhenskii (Lomonosov Inst. Fine Chem. Technol., Moscow.) *J. Gen. Chem.* (U.S.S.R.) 15, 60-4(1945)(English summary).—The Me ether of thymol (36.6 g.) was condensed with $(CH_3CO)_2O$ (19.6 g.), in 120 g. of $PhNO_2$, in the presence of 34 g. of $AlCl_3$ at 30-35°, yielding 81.3% (of theoretical) of *β-(2-methyl-4-methoxy-5-isopropylbenzoyl)-propionic acid* (I), m. 92-3°. Boiling of I for 12 hrs. with conc'd. HCl in the presence of Zn yielded *γ-(2-methyl-4-methoxy-5-isopropylphenyl)butyric acid* (II), m. 63.5-5°. Conc'd. H_2SO_4 had no effect on II at room temp. but at 80° it yielded 5-methyl-7-methoxy-α-tetralone-8-sulfonic acid (III), m. 240-1°. The treatment of III in the presence of 50% H_2SO_4 with superheated steam at 140-150° yielded *γ-(2-methyl-4-methoxyphenyl)butyric acid* (IV), m. 81-2°, and a small amt. of 5-methyl-7-hydroxy-α-tetralone (V), m. 101-2.5°. The reduction of V yielded 5-methyl-7-hydroxytetralin, m. 104-5°. A. A. Pudgorny

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1ST AND 2ND ORDERS

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3RD AND 4TH ORDERS

10

The syntheses of polyene compounds—analogs of carotenes. II. N. A. Preobrazhenskii and V. V. Shokina (Lomonosov Inst. Fine Chem. Technol., Moscow). *J. Gen. Chem.* (U.S.S.R.) 15, 65-9(1945)(English summary); cf. *C.A.* 35, 6575[5].—Gradual addn. of 7.4 g. of tetrahydroionone (b_{15} 124-7°) to the Grignard reagent from 0.95 g. Mg and 4.11 g. EtBr treated with 2.64 g. dry C_2H_2 yielded ethoxy(tetrahydro-α-hydroxyionyl)acetylene, $Me_2C_6H_8$-$CH_2CH_2CMe(OH)C{:}COEt$, which is hydrogenated over Pd to give *1-ethoxy-2-(tetrahydro-α-hydroxyionyl)ethylene* (II), $C_{15}H_{28}O_2$, $b_{0.5}$ 113-14°, d_4^{20} 0.953, n_D^{20} 1.485. With semicarbazide-HCl and KOAc, II gives the *semicarbazone*, $C_{16}H_{29}N_3O_2$, m. 169-85°, of (*tetrahydro-α-hydroxyionyl*)-*acetaldehyde* (the aldehyde being formed by hydrolysis of II and rearrangement at the double bond). With HCl, II is hydrolyzed and at the same time H_2O is split off to give *tetrahydroionylideneacetaldehyde*, $C_{13}H_{20}O$, b_1 82-5°; *semicarbazone*, m. 159-61°.

A. A. Podgornyy

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PREOBRAZHENSKIY, N. A.

"Synthesis of Some Pilocarpine Analogs. XVIII. On Pilocarpine Alkaloids," Zhur. Obshch. Khim. 15, No. 3, 1945.

Mbr., Moscow Inst. Fine Chemical Technology im. M. V. Lomonosov

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PREOBRAZHENSKIY, N. A.

"Preparations in the Class of Quaternary Ammonium Salts," Zhur. Obshch. Khim. 15, No. 3, 1945.

Mbr., Moscow Inst. Fine Chemical Technology im. Lomonosov.

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Synthetic studies on meroquinene K. S. Lifshits, S. A. Proobrazhenskii and A. N. Baryshnikova (*Moscow Fine Chem. Tech. Inst. Lomonosova*). *J. Gen. Chem. U.S.S.R.* 15, (24 7)1945 (English summary). A no. of derivs. of meroquinene were prepd. and an improved method for the prepn. of meroquinene from quinine was found. Quinine HCl (21 g.) in 135 cc. dry $CHCl_3$ was treated with 21 g. $SOCl_2$ and heated gently for 2-3 hrs. until HCl evolution ceased. The sepd. quinine chloride HCl was filtered off and taken up in water (with ice); after filtration the soln. was treated with NH_4OH with ice cooling to yield quinine chloride, isolated by extn. with benzene and evapn. of the solvent and addn. of Et_2O; yield 85.5%, m. 151° (from benzene). This (25 g.) was added to 25 g. KOH in 150 cc. dry EtOH, was refluxed for 24 hrs., concd. *in vacuo*, and treated with 50 cc. water; the sepd. quinene was taken up in Et_2O, decolorized, and the solvent removed after drying to yield 95% *quinene*, m. 81-2° (from Et_2O). Heating of 5 g. quinene and 13.5 cc. 25% H_3PO_4 in a sealed tube to 170-80° for 10 hrs., followed by treatment with water, pptn. of the PO_4 ion by $Ba(OH)_2$, satn. with CO_2 to remove Ba ions, concn. to remove the sepd. *p*-methoxylepidine and tarry matter, washing with small amts. of $CHCl_3$ and Et_2O, and final evapn. to dryness gave 44.9% *meroquinene*, m. 221-2° (from MeOH-EtOAc); the latter heated with EtOH satd. with HCl gave 68.7% Et ester, b. 120-2°, while heating with Ac_2O gave 65% *N-acetylmeroquinene*, m. 110° (from $CHCl_3$). The Et ester treated with $BzCl$ in $CHCl_3$ in presence of K_2CO_3 and a little H_2O gave the *Et ester of N-benzoylmeroquinene*, b. 200-2°, n_D^{20} 1.[illegible]. Meroquinene (6 g.), 7.5 g. 28% formalin, 4.6 g. 95% HCO₂H, and 2.5 cc. water were heated at 100° for 1 hr. to yield 94.7% *N-methylmeroquinene* as a yellow oil, which yielded the Et ester on treatment with alk. HCl as above, b. 102-4°/30-2 mm., n_D^{22} 1.1017, [illegible] cc. The treatment of the meroquinene Et ester with MeI for 10-12 hrs. at room temp. gave the *metiodide*, m. 130-2° (from EtOH), which, on treatment with 10% NaOH, gave the *Et ester of N-methylmeroquinene*, identical with the 1st prepn. Treatment of 1 g. Na in 3 cc. xylene with cooling and stirring with 1 g. *N*-benzoylmeroquinene Et ester, 0.6 g. HCO_2Et, and 2 cc. xylene for 5-6 hrs. gave a ppt. of the *Na salt of formylbenzoylmeroquinene* on treatment with dry Et_2O. The aq. soln. of this was acidified with AcOH to yield 0.31 g. of a yellowish oil of *formyl-N-benzoylmeroquinene Et ester*. G. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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PREOBRAZHENSKIY, N. A.

"The Synthesis of the Alkaloid Histamine," Zhur. Obshch. Khim. 15, No. 7-8, 1945.

Mbr., Moscow Inst. Fine Chemical Technology im. Lomonosov

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PREOBRAZHENSKIY, N. A.

"Synthetic Studies in the Series of γ-Methyl-nicotinic Acid," Zhur. Obshch. Khim. 15, No. 7-8, 1945.

Mbr., Moscow Inst. Fine Chemical Technology im. M. V. Lomonosov.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PREOBRAJENSKY, N. A.

"On Pilocarpine Alkaloids. XVII. The Synthesis of d-Norpilocarpidine (Novopilocarpidine)." Preobrajensky, N. A. and Preobrajensky, V. A. (p. 672)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1945, Volume 15, no. 7-8.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

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Synthesis of the alkaloid emetine. I. Synthesis of α-methyl-δ-valerolactone-γ-carboxylic acid. R. S. Livshits, N. A. Preobrazhenskii, and M. S. Bardinskaya (Moscow Inst. Chem. Technol.). *J. Gen. Chem.* (U. S. S.R.) 15, 880-10(1945). When 2 moles $MeCNa(CO_2Et)_2$ are condensed with 1 mole $ClCH_2CH_2CO_2Et$, they give 78% *di-Et α-methyl-α-carbethoxyglutarate* (I), b_5 142°, n_D^{20} 1.4350, d_4^{20} 1.0735, MR_D calcd. 67.97, found 67.02. I, boiled 20 hrs. with HCl, gave 92% α-methylglutaric acid, b_{11} 195-6°, m. 78°, which on vacuum distn. partly decompd. to the anhydride. Esterification of this distn. mixt. gave 85% *di-Et α-methylglutarate* (II), b_5 78-81°, n_D^{20} 1.4205, d_4^{20} 1.0045, MR_D calcd. 51.41, found 51.52. II was treated with Na in abs. xylene and then with HCO_2Na; the mixt. was decompd. with ice, the H_2O layer extd. with Et_2O, and the ext. reduced with Al-Hg. During vacuum distn. the product lost EtOH and formed 60% *Et α-methyl-δ-valerolactone-γ-carboxylate*, b_{11} 161-2°, n_D^{20} 1.4508, d_4^{20} 1.1002, MR_D calcd. 44.66, found 45.54. Hydrolysis with HCl gave the free *acid*, b_{11} 185-90°, m. 104-6°. Heating with alkali opened the lactone ring.

H. M. Leicester

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001342

PREOBRAJENSKY, N. A.

"Synthetic studies in the Series of r-Methylnicotinic Acid. II." Beer, A. A. and Preobrajensky, N. A. (p. 858)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1945, Volume 15, no. 9-10.

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The synthesis of rubber vulcanization accelerators in the field of polysulfide compounds. S. S. Lyubitz and N. A. Preobrazhenskii (Moscow Inst. Fine Chem. Tech.). *J. Gen. Chem.* (U.S.S.R.) 15, 925-30(1945). Anabasine (4 g.) in 20 cc. benzene was treated slowly with 1 g. NaOH in 2 cc. water at 15-20°, and 1.88 g. CS_2 and 5 cc. benzene; after stirring for 1 hr. there was filtered off 97%, yield of Na *anabasinedithiocarbamate*, as a very hygroscopic yellow solid. To 15% soln. of this salt in water was added a slight excess of $Zn(OAc)_2$ soln. to give 81.3%, of the corresponding *Zn salt* as a yellowish amorphous solid, which can be crystd. from EtOH. Two g. of the *Zn* salt in 10 cc. dry benzene was treated with 2 g. S chloride in 1 cc. benzene to yield 50% of *anabasine thiuram tetrasulfide*, a yellow solid, insol. in most org. solvents, m. 106-8°. To aq. NaOH (1:1.5) were added mol. amts. of tetrahydroquinoline and CS_2; after shaking for 4 hrs. up to 95% *Na tetrahydroquinolinedithiocarbamate* was formed, a greenish yellow solid, m. 76-7° (from water-benzene); this was converted in 80% yield into the *Zn salt*, m. 201-2° (from benzene). The latter (0.5 g.) under 20 cc. dry Et_2O was treated with 0.24 g. S chloride in 5 cc. Et_2O and stirred for 1 hr. to yield almost 100% *tetrahydroquinolinethiuram tetrasulfide*, m. 71-4°. Tetrahydroisoquinoline (0.5 g.) in 15 cc. benzene was treated with 0.15 g. NaOH in 0.3 cc. water and 0.3 g. CS_2 in 10 cc. benzene to yield 69% colorless *Na tetrahydroisoquinolinedithiocarbamate*, m. 199-200°. The yield is raised to 97% by the use of excess NaOH and CS_2. The *Zn salt* is colorless, amorphous, m. 251-2° (from benzene, $CHCl_3$). The Na salt (3 g.) in 30 cc. benzene was treated with 1 g. S chloride in 5 cc. benzene, after which removal of the benzene gave 2.5 g. *tetrahydroisoquinolinethiuramdisulfide*, m. 132-3° (from CS_2).

G. M. Kosolapoff

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

Ca

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Synthesis of tropinone. II. Investigation of synthetic paths to the alkaloid scopolamine. N. A. Preobrazhenskii, I. A. Rubtsov, T. F. Dankova, and V. P. Pavlov (Moscow Inst. Fine Chem. Tech.). *J. Gen. Chem.* (U.S.S.R.) 15, 972-6(1945)(English summary); cf. Shchukina, *et al.* *C. A.* 35, 2521[7].—In a flask with a reflux condenser provided with a downward condenser, there was prepd., from 55 g. EtBr and 12 g. Mg in abs. Et_2O, in the usual manner the Iotsich complex (Iotsich, *J. Russ. Chem. Soc.* 35, 430 (1903)). This is rapidly treated with good stirring with 80 g. $HC(OEt)_3$, which yields a white crumbly powder; 150 cc. dry benzene are then added, the water is drained from the jacket of the reflux condenser, and the Et_2O is cautiously distd. Water is readmitted into the reflux condenser and the mixt. is heated to 75-85°, at which point a vigorous reaction sets in; after further heating for 0.5 hr., the cooled mass is filtered and neutralized at 0° by satd. NH_4Cl and extd. with Et_2O; the washed and dried ext. is distd. to remove a little unreacted $HC(OEt)_3$ (at 4.5 mm.) and the residual oil is gently heated *in vacuo* over fused KOH and distd. to yield 60-2% *acetylenedicarboxaldehyde bis(di-Et acetal)*, b_4 102°, m. 21-2° (from EtOH). Hydrogenation in EtOH, using Raney Ni gave *malealdehyde bis(di-Et acetal)* (80.2%), b_{10} 110-1.5°, which was shaken with 0.1 *N* H_2SO_4 to give an *aq. soln. of malealdehyde* (confirmed by prepn. of *pyridazine*, b. 203-5° (*picrate*, m. 168-9°)), which was used as such. Hydrogenation of the acetylene acetal to completion gave the *diacetal of succinaldehyde* (85.5%), b_{10} 123-5°, which, shaken with dil. H_2SO_4 at room temp. for 1 hr., gave free *succinaldehyde* (77.7%), b_4 63-5°. An aq. soln. of malealdehyde (from 10 g. diacetal), 12 g. $CO(CH_2CO_2H)_2$, 4.5 g. $MeNH_2Cl$, and 24 g. NaOAc in 100 cc. water was kept for 24 hrs. and extd. at 0° with Et_2O. Removal of the Et_2O and treatment of the residue with picric acid in ether gave *tropenone picrate*, m. 191-1.5° (from water); treatment of this with HCl and conversion of the HCl salt by K_2CO_3 gave free *tropenone* as a slowly crystg. oil, m. 40-0.5°; *dipiperonylidene deriv.*, m. 286-6.5°. Similar condensation using succinaldehyde gave 30% *tropinone* (m. 42-2.5°); *dipiperonylidene deriv.*, m. 211-19° (from EtOAc). G. M. Kosolapoff

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PROCESSES AND PROPERTIES INDEX

Ca

Synthetic studies in the 4-methylnicotinic acid series

II. A. A. Beer and N. A. Preobrazhenskii (Moscow Inst. Chem. Technol.). *J. Gen. Chem.* (U.S.S.R.) 16, 858-60 (1945); cf. C. 1. 40, 5724. Et 4-methylnicotinate (I) and BzH heated in a sealed tube at 100° for 20 hrs. give *Et 4-styrylnicotinate*, an oil (*picrate*, m. 167-8.5°; *HCl salt*, m. 187-9°). Hydrogenation over Pt at room temp. for 6 hrs. gives $Ph(CH_2)_2C_6H_3NCO_2Et$, an oil (*picrate*, m. 134-4.5°). Similarly, I and furfural give $4\text{-}C_4H_3OCH:CHC_5H_4NCO_2Et$, m. 67.5-8° (*picrate*, m. 179-81°). On hydrogenation, this gives stepwise satn. of 3 double bonds to form $C_4H_3OCH_2CH_2C_5H_4NCO_2Et$, m. 85-7.5°. Further hydrogenation saturates the pyridine ring. H. M. Leicester

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

HH

Chemical foundation of modern trends in chemotherapeutic research. N. A. Preobrazhenskii and A. G. Natradze. *Uspekhi Khim.* 15, 427-55(1946) —Review with emphasis on antagonism to metabolites of the sulfanilamide-*p*-aminobenzoic acid type. 103 references.

G. M. Kosolapoff

COMMON ELEMENTS

MATERIALS INDEX

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APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0013429

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PREOBRAZHENSKIY, N. A.

"Synthetic Investigation for a Material to Speed up Rubber Vulcanization," Zhur. Obshch. Khim. 17, No. 9, 1947.

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CA

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Vulcanization accelerators in the polysulfide series. II. S. S. Livshits and N. A. Preobrazhenskii (Inst. Fine Chem. Tech., Moscow). *J. Gen. Chem.* (U.S.S.R.) 17, 1706-9(1947)(in Russian); cf. *C.A.* 40, 6872².—2-Pipecoline (0.5 g.) in 20 cc. Et_2O treated with cooling and stirring with 0.25 g. NaOH in 0.4 cc. H_2O, followed by 0.44 g. CS_2 in 5 cc. Et_2O, gave 1 g. *Na 2-pipecolinedithiocarbamate*, m. 117–19°; after drying over P_2O_5, it m. 215°. *Zn salt*, m. 193–4°, sol. in benzene. The Na salt (0.4 g.) in 30 cc. Et_2O was treated with 0.15 g. S_2Cl_2 in 5 cc. Et_2O with stirring; removal of Et_2O and evapn. *in vacuo* yielded 0.25 g. *2-pipecolinethiuram tetrasulfide*, decomp. 37°. 3-Pipecoline (0.5 g.) in 20 cc. Et_2O was stirred with 0.23 g. NaOH in 0.45 cc. H_2O, followed by 0.44 g. CS_2 in 5 cc. Et_2O with cooling; after stirring 1 hr., concn. *in vacuo* and addn. of Et_2O gave 1 g. *Na 3-pipecolinedithiocarbamate*, m. 199–200° (from EtOH-Et_2O); *Zn salt* (from the Na salt and Zn acetate), m. 204–5° (from benzene and Et_2O). The Zn salt (1 g.) in 25 cc. Et_2O stirred 3–4 hrs. with 0.37 g. S_2Cl_2 in 5 cc. Et_2O, gave 93.3% *3-pipecolinethiuram hexasulfide*, m. 107–8° (from CS_2-Et_2O). 4-Pipecoline (0.5 g.) in 2 cc. Et_2O added to 0.17 g. CS_2 in 1 cc. cold Et_2O gave 92.9% *4-pipecoline 4-pipecolinedithiocarbamate*, m. 155–6° (from EtOH); the *Na salt* made analogously to that of 2-pipecoline, m. 200–1° (from EtOH-Et_2O); *Zn salt*, m. 219–19.5° (from benzene); *Cd salt*, amorphous, high-melting solid, almost insol. in the usual org. solvents. The Na salt (0.5 g.) in 15 cc. Et_2O treated with cooling with 0.2 g. S_2Cl_2 in 5 cc. Et_2O, stirred 1 hr., and filtered gave *4-pipecolinethiuram tetrasulfide*, m. 164–4.5° (from CS_2; 57.7%); if an excess (30–50%) of S_2Cl_2 is used, the product is doughlike.

G. M. Kosolapoff

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PREOBRAZHENSKIY, N. A.

"Synthetic Research in a Series of Analogues of a Colchicine Alkaloid," Zhur. Obshch. Khim. 18, No. 7, 1948.

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PREOBRAZHENSKIY, N. A.

USSR/Chemistry - Isoquinolene
Chemistry - Synthesis

Aug 48

"Studies of a Series of Isoquinoline Compounds: Synthesis of Quaternary Derivatives of Hydrocotarnine," R. S. Livshits, Yu. M. Agul'nik, N. A. Preobrazhenskiy, Moscow Inst of Fine Chem Tech imeni M. V. Lomonosov, 4 pp

"Zhur Obshch Khimii" Vol XVIII (LXXX), No 8

Describes synthesis of iodoalkyls of 1-alkoxy-hydro-cotarnine: ethoxy- butoxy- (isoamyloxy-decyloxy, 1-alkyl-hydrocotarnine (isobutyl-, isoamyl-) and their toluene-sulfonates. Submitted 17 Jul 46.

PA 19/49T22

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PREOBRAZHENSKIY, N. A.

FA 30/49T14

USSR/Chemistry - Synthesis Sep 48
Chemistry - Vitamin A

"Research in Synthetizing Vitamin A: III, Synthesis of β-Ionolidenacetic Aldehyde," N. A. Preobrazhenskiy, I. A. Rubtsov, Moscow Inst Fine Chem Tech imeni M. V. Lomonosov, 4 3/4 pp

"Zhur Obshch Khimii" Vol XVIII, No 9

Describes synthesis of β-ionolidenacetic aldehyde by condensing β-ionone with ethoxyacetylene, hydrogenation of oxyacetylene ester into oxyvinyl ester and subsequent hydrolysis of vinyl ester. Proves that ethoxyacetylene joins β-ionone in the 1,2 position by preparing the ethyl ester of β-ionolidenacetic acid.

30/49T14

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PREOBRAZHENSKIY, N. A.

USSR/Chemistry - Synthesis
Chemistry - Alkaloids

Sep 48

"Synthetic Research in a Series of Analogues of a Colchicine Alkaloid," T. F. Bankova, L. G. Yevdokimova, I. I. Stepanov, N. A. Preobrazhenskiy, Moscow Inst Fine Chem Tech imeni M. V. Lomonosov, 6 pp

"Zhur Obshch Khimii" Vol XVIII, No 9

Describes synthesis of new derivatives of β-phenylethylamine. Structurally, they have many analogies with the proposed structure of colchicine and other well-known preparations with growth action. Synthesizes β-anisil-γ-(4-methoxyphenyl)-propylacetamine and β-(n-oxyphenyl)-γ-(4-methoxyphenyl)-propylamine. Also prepares methyl ester of oxymethylenecamphor and methyl and ethyl esters of camphocarboxylic acid. Submitted 10 Nov 46.

PA 30/49T13

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PREOBRAZHENSKIY, N. A.

USSR/Chemistry - Synthesis
Chemistry - Alkaloids Sep 48

"Pilocarpine Alkaloids: XXI, New Synthesis of Alkaloid Pilosinine," N. A. Dryanova, S. I. Zav'yalov, N. A. Preobrazhenskiy, Moscow Inst Fine Chem Tech imeni M. V. Lomonosov, 2 3/4 pp

"Zhur Obshch Khimii" Vol XVIII, No 9

Describes new synthesis of phthlimidmethyl-homopilosinylketone, starting with α, β- butenolide and γ ethoxyacetoacetic ether. Submitted 7 Jun 47.

PA 30/49T12

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PREOBRAZHENSKII, N. A.

N. A. Preobrazhenskii and I. A. Rubtsov, Investigation in the field of synthesis of vitamine A. III. Synthesis of β-iono-lyden-acetic aldehyde. p. 1719

The synthesis is described of β-iono-lyden-acetic aldehyde by the method of condensation of the β-ionone with ethoxy-acetylene, by hydration of the oxy-acetylene ether in oxy-vinyl ether and following hydrolysis of vinyl ether.

The Moscow Lomonosov Inst. of Exact Chemical Technology.
May 22, 1947

SO: Journal of General Chemistry (USSR) 28, (80) No. 9 (1948)

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PREOHRAZHENSKII, N. A.

T. F. Dankova, L. G. Evdskimova, I. I. Stepanov, and N. A. Preohrazhenskii, Investigations of syntheses in the series of analogs of colchicine alkaloid. p. 1724

The synthesis is described of new derivatives of β-phenyl-ethyl-amine which have in their structure a number of analogies with the proposed structure of colchicine and other known preparations with a growth-action.

The Moscow Lomonosov Inst. of Exact Chemical Technology.
November 10, 1946

SO: Journal of General Chemistry (USSR) 28, (80) No. 9 (1948)

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PREOBRAZHENSKII, N. A.

N. A. Driamova, S. I. Zavialov and N. A. Preobrazhenskii, On pilocarpine alkaloids. XXI. A new synthesis of pilosinine alkaloids. p. 1733

A new synthesis has been realized, that of phthalimide-methyl-homo-pilosinyl-ketone going out from α,β-butenolide and γ-ethoxy-aceto-acetic ether.

The Moscow Lomonosov Institute of Exact Chemical Technology.
June 7, 1947

SO: Journal of General Chemistry (USSR) 28, (80) No. 9 (1948)

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PREOBRAZHENSKIY, N. A.

"Synthesis of O-4-Xylidine," Zhur. Obshch. Khim. 22, No. 5, 1949.

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PREOBRAZHENSKIY, N. A.

"Synthetic Preparation of Vitamin B_2 (Riboflavin) Zhur. Prik. Khim. 22, No. 5, 1949.

All-Union Sci-Res. Vitamin Inst.

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PREOBRAZHENSKIY, N., A., Pa. 173T23

USSR/Chemistry - Pharmaceuticals Dec 50
Medicine - Amobic Dysentery

"New Synthesis of the Alkaloid Emetine," R. P. Yevstigneyeva, R. S. Livshits, L. I. Zakharkin, M. S. Baynova, N. A. Preobrazhenskiy.

"Dok Ak Nauk SSR" Vol 75 LXXV, no 4, pp 539-542

In addn to being specific remedy against amoebic dysentry, emetine is effective against Trematodes and some bacteria which produce serious diseases in man and animals. Most probable formula for emetine, advanced by authors, corresponds to R. Robinson's formula based on theory of physiological conditions ("Nature," Vol CLXII, No 524, 155, 1948.) Formula has now been confirmed by authors, who carried out complete synthesis of racemic emetine in several different ways. Two reaction schemes illustrate authors' complete synthesis.

Pa. 173T23

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Synthesis of dimethylaminoethyl ether of diphenylcarbinol (benadryl) and its analogs. T. F. Dankova, N. A. Preobrazhenskii, and M. A. Miropol'skaya (M. V. Lomonosov State Univ., Moscow). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 570-4(1951).—Heating 48 g. $Cl(CH_2)_2Br$, 20 g. 40% NaOH, and 15 g. Et_2NH at 38-40° 6-7 hrs., dilg. to dissolve the NaBr, sepg. the oil, treating it with 3-5 ml. concd. HCl, sepg. the residual oil, treating it with excess HCl, extg. with Et_2O, and evapg. the aq. soln. gave 98% *3-diethylaminopropyl chloride-HCl; free base*, b. 165-6°. Reaction of 15.4 g. $Cl(CH_2)_3Br$, 13 g. 33% aq. Me_2NH, and 4 g. 40% NaOH 2-3 days at 12-14°, extn. with Et_2O, evapn. of the ext., acidification with HCl, extn. with Et_2O, and evapn. of the aq. soln. gave 52% *3-dimethylaminopropyl chloride-HCl; free base*, b. 134-5°. Heating 4 g. Ph_2CHOH with EtONa from 0.5 g. Na and 12 ml. abs. EtOH 20-30 min. on a steam bath, adding 2.5 g. $Me_2NCH_2CH_2Cl$, heating 6 hrs., adding H_2O, acidifying with HCl, extg. with Et_2O, treating the aq. soln. with K_2CO_3, and extg. with Et_2O gave 18% $Ph_2CHOCH_2CH_2NMe_2$, b_4 172-4°; *HCl salt*, m. 103-4° (from EtOH-Et_2O). Analogously were prepd.: $Ph_2CHOCH_2CH_2CH_2NEt_2$ (20%), b_7 190-2°, d_4^{20} 0.9205, n_D^{20} 1.487 (*HCl salt*, hygroscopic solid), and $Ph_2CHOCH_2CH_2CH_2NMe_2$ (15%), b_4 190-2°, d_4^{20} 1.017, n_D^{20} 1.544 (*HCl salt*, hygroscopic solid). *Benadryl base*, b_4 172-4°, d_4^{20} 1.020, n_D^{20} 1.5083. $Me_2NCH_2CH_2Cl$ (2.5 g.), 2.4 g. $PhCH_2OH$, and EtONa (from 0.5 g. Na and 12 ml. EtOH) gave 15% $PhCH_2OCH_2CH_2NMe_2$, b_4 115-17°, d_4^{20} 0.9087, n_D^{20} 1.5048 (*HCl salt*, m. 92-4° (from Et_2O-EtOH)); similarly obtained were: $PhCH_2OCH_2CH_2CH_2NEt_2$ (20%), b_4 142-4°, d_4^{20} 0.9573, n_D^{20} 1.5008 (*HCl salt*, hygroscopic solid), and the *di-Me analog* (20%), b_{10} 125-7°, d_4^{20} 0.980, n_D^{20} 1.500 (*HCl salt*, hygroscopic solid). G. M. Kosolapoff

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PREOBRAZHENSKIY, N. A.

USSR/Chemistry - Alkaloids

Apr 51

"Investigations on the Synthesis of a Number of Analogues of the Alkaloid Colchicine, II," T. F. Dankova (deceased), T. N. Bokova, N. A. Preobrazhenskiy; and A. Ye. Petrushenko, I. A. Il'shteyn, N. I. Shvetsov, Students, Moscow Inst of Fine Chem Tech

"Zhur Obshch Khim" Vol XXI, No 4, pp 787-800

To ascertain structure of colchicine and possibly find compds with simpler structure with colchicine-like action, synthesized the following, contg proved or assumed structural elements of colchicine: 4 derivs of α,β-diphenylethylamine, 2 derivs of

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USSR/Chemistry - Alkaloids (Contd)

Apr 51

α,γ-diphenylpropylamine, 2 derivs of β,δ-(diphenyl)-butylamine, 7 derivs of γ-keto-α,γ-diphenylpropylene.

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PREOBRAZHENSKIY, N. A.

USSR/Chemistry - Chloromethylation, Vitamin B_2 Jun 51

"Chloromethylation and Subsequent Reduction of Aromatic Nitro-Compounds," V. M. Berezovskiy, V. A. Kurdyukova, N. A. Preobrazhenskiy, All-Union Sci Res Vitamin Inst

"Zhur Obshch Khim" Vol XXI, No 6, pp 1163-1166

n-Nitrotoluene treated with dichloromethyl ether and chlorosulfonic acid or low concn of fuming H_2SO_4 is converted into 2-chloromethyl-4-nitrotoluene (II) with high yield of latter. Under more rigid conditions, 2,6-bis-chloromethyl-4-nitrotoluene is formed. Mechanism of the secondary reaction which leads to formation of di-(2-methyl-5-nitrophenyl)-methane is demonstrated. Hydrogenation of chloromethyl derivs obtained, in presence of Pt or Ni catalysts, yielded corr dechlorinated amines. II can be reduced (with Ni catalyst) to 1,2,4-xylidine, which is important starting material in the synthesis of riboflavin. II is highly toxic and irritating when applied to the skin, but introduction of 2d CH_2Cl group eliminates toxicity almost completely.

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PREOBRAZHENSKIY, N. A.

191T29

USSR/Chemistry - Quinoline Derivatives Jul 51

"Research in the Field of Organic Polysulfide Compounds. III," S. S. Livshits, N. A. Preobrazhenskiy, Moscow Inst Fine Chem Technol imeni M. V. Lomonosov

"Zhur Obshch Khim" Vol XXI, No 7, pp 1303-1308

Worked out syntheses of various salts (including Na, Zn,) and thiuramsulfides of γ-ethyl- and γ-isopropylpiperidyl-dithiocarbamic acids, γ-ethyl- and γ-isopropylpiperidine, trans- and cis-decahydroquinolyl-dithiocarbamic acids, and trans- and cis-decahydroquinolines.

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PREOBRAZHENSKIY N. A.

Isoquinoline compounds. III. Synthesis of 2-methyl-1-(3,4-dimethoxybenzyl)-5,6-dimethoxy-1,2,3,4-tetrahydroisoquinoline. R. S. Livshits, A. S. Bainova, G. I. Bazileyskaya, E. I. Genkin, N. A. Preobrazhenskii, Yu. A. Rozanova, and Z. A. Baranova (M. V. Lomonosov State Univ., Moscow). Zhur. Obshchei Khim. (J. Gen. Chem.) 21, 1354-60 (1951); cf. C. A. 42, 2606g; 43, 2212i.--Guaiacol allyl ether (74% from CH_2:$CHCH_2Cl$ and guaiacol), b_{13} 111-13°, d_{20}^{20} 1.0592, n_D^{20} 1.5362, heated 3 hrs. to 230° gave 65% 2-hydroxy-3-methoxy-1-allylbenzene, b_{15} 124-5°, d_{20}^{20} 1.0904, n_D^{20} 1.5411, which, heated with KOH 5 hrs. to 170°, gave 52% 1-(2-hydroxy-3-methoxyphenyl) propene, b. 125-8°, m. 66°. This with Me_2SO_4 and aq. NaOH gave the Me ether, b_{11} 128°, d_{20}^{20} 1.0372, n_D^{20} 1.5535. This (25 g.) in 480 ml. H_2O and 58 g. $K_2Cr_2O_7$ treated with 45 ml. concd. H_2SO_4 at 38-40° gave 70% 2,3-$(MeO)_2C_6H_3CHO$, b_{11} 133-5°, m. 52-3°, which with $CH_2(CO_2H)_2$ gave 93.6% 2,3-$(MeO)_2C_6H_3CH$:$CHCO_2H$, m. 177°, yielding with NaHg 85% of the propionic acid, m. 68°, which with $MeOH-H_2SO_4$ gave 90% Me ester, b_9 154-5°, d_{20}^{20} 1.127, n_D^{20} 1.5130. This with satd. NH_4OH gave 86% amide, m. 99-100°, yielding with Br-KOH 72.5% 2,3-$(MeO)_2C_6H_3CH_2$-CH_2NH_2 (I). b_9 134-5°. Vanillin and Me_2SO_4 gave 90% 3,4-$(MeO)_2C_6H_3CHO$, which with 40% formalin in H_2O-EtOH in the presence of KOH yielded 96% 3,4-$(MeO)_2C_6H_3CH_2OH$, b_{10} 159-60°; this and $SOCl_2$ gave 90% of the corresponding chloride, m. 51°, which with KCN yielded 68% cyanide, b_9, 168-70°, hydrolyzed to the acid (87%), m. 98-9° [Et ester (85%), b_5 159-60°]. The ester (3.75 g.) and 3 g. I with a few drops of pyridine heated 3 hrs. at 180° gave 62.3% N-(2,3-dimethoxyphenethyl)-a-(3,4 dimethoxyphenyl) acetamide, m. 89° (from petr. ether). This heated with PCl_5 2 hrs. at

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100° gave 65% 3,4-dimethoxyphenyl 5,6-dimethoxy-3,4-dihydro-1-isoquinolyl ketone, m. 119.5° (from EtOH), which with MeI gave the methiodide, m. 178-9° (from EtOH). The latter (1 g.) with Zn dust (cf. C.A. 42, 2606g) gave 69.6% 2-methyl-1-(3,4-dimethoxybenzyl)-5,6-dimethoxy-1,2,3,4-tetrahydroisoquinoline, m. 76-7° (from ligroine); HCl salt, m. 139-41°. The compd. is a model substance in the synthetic studies on morphine. IV. Synthesis of 1-[2-(3-pyridyl)ethyl]-6,7-dimethoxy-1,2,3,4-tetrahydroisoquinoline. R. S. Livshits, R. P. Evstigneeva, [illegible] C. Bainova, and N. A. Preobrazhenskii. Ibid. 1360-4.--Conventional esterification gave 80% Me nicotinate, b_7 89-90°, m. 38°, which with $N_2H_4H_2O$ gave 98-9% hydrazide, m. 158-9°; this with BzCl at 0° gave 96.5% N-Bz deriv., m. 185-6°, which, heated in $(CH_2CH)_2$ with Na_2CO_3 2 min. to 160° yielded 28-30% nicotinaldehyde, b_{12} 85-90°, condensed with $CH_2(CO_2H)_2$ to 3-pyridineacrylic acid, m. 232-3° (from EtOH). This (8 g.), 40 ml. AcOH, 80 ml. HI (d1.71), and 3 g. red P refluxed 14-15 hrs. gave 90% 3-pyridinepropionic acid-HI, m. 163-4°, yielding with Na_2HPO_4 the free acid, m. 157-8° (from EtOH) [Et ester (75.7% with EtOH-HCl), b_7 129-30°, n_D^{20} 1.4983, d_{20}^{20} 1.071; HCl salt, m. 95-6°; picrate, m. 81-2°]. The Et ester (3 g.) and 3 g. 3,4-$(MeO)_2C_6H_3CH_2CH_2NH_2$ heated with a few drops of pyridine 3 hrs. at 180° gave 80.7% N-(3,4-dimethoxyphenethyl)-3-pyridinepropionamide, m. 103°, which heated with $PCCl_3$ 2.5 hrs. at 100° yielded 85% 1-[2-(3-pyridyl)ethyl]-6,7-dimethoxy-3,4-dihydroisoquinoline, m. 88-9° (from petr. ether); HCl salt, m.

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198-200° (from EtOH). The free base (1 g.), 30 ml. H_2O, 4 g. Zn dust, and 0.1 g. $CuSO_4$ treated with 3 ml. concd. H_2SO_4 and gently heated 1 hr., then heated more strongly 2 hrs., gave 70% 1-[2-(3-pyridyl)ethyl]- 6,7-dimethoxy-1,2,3,4-tetrahydroisoquinoline, an oil; HCl salt, m. 241-3° (from EtOH).

G. M. Kosolapoff

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PREOBRAZHENSKIY, N. A.

USSR/Chemistry - Pharmaceuticals Jul 51

"Investigation Into a Series of Isoquinoline Compounds. IV. Synthesis of 1-/β-(β'-Byridyl)-Ethyl/-6,7-Dimethoxy-1,2,3,4-Tetrahydroisoquinoline," R. S. Livshits, R. P. Yevstigneyeva, M. S. Baynova, N. A. Preobrazhenskiy, Moscow Inst Fine Chem Technol imeni M. V. Lomonosov

"Zhur Obshch Khim" Vol XXI, No 7, 1360-1364

Synthesized over intermediate compds (many not earlier described in literature) isoquinoline deriv listed above, opening way to synthesis of analogues of emetine close to it in structure. Footnote states that subsequent to submission of article to editors (30 Mar 49) above authors and L. I. Zakharkin completed synthesis of emetine, established its constitution as 4', 5'-dimethoxy-6-ethyl-7-(1"-methyl-6", 7"-dimethoxy-1", 2",3",4"-tetrahydroisoquinolyl)-3,4,5,6,7,8,9,10-octahydro-1,2:1',2'-benzoquinolidine (structural formula is shown), which differs from constitution proposed by Brindley and Pyman.

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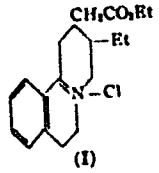
Syntheses in the pseudoheliotridane series. A. D. Kuzovkov and G. P. Men'shikov (S. Ordzhonikidze All-Union Chem.-Pharm. Inst., Moscow). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 2245–8(1951); cf. *C.A.* 41, 3092b.—Heating 16 g. $PhCH_2NHMe$ with 4 g. chloropseudoheliotridane (I) in kerosene 3 hrs. in a N atm. to 180–200° gave 3.9 g. *N-methyl-N-benzylpseudoheliotridylamine*, b_5 179–81°, d_4^{20} 0.9983, n_D^{20} 1.5306, $[\alpha]_D$ −18.06°. Similarly was prepd. *N-(2-hydroxyethyl)pseudoheliotridylamine*, b_5 163–5°, d_4^{20} 1.036, n_D^{20} 1.5027, $[\alpha]_D$ −13.7°, as was *N-ethylpseudoheliotridylamine*, b_5 160–70°, d_4^{20} 0.9013, n_D^{20} 1.4766, $[\alpha]_D$ −10.85°. The latter (2.5 g.) and 4 ml. 30% formalin heated with 2 g. HCO_2H 1 hr. at 100° gave 1.5 g. *N-methyl-N-ethylpseudoheliotridylamine*, b_5 150–1°, d_4^{20} 0.9887, n_D^{20} 1.4722, $[\alpha]_D$ −11.93°. I and Et_2NH in kerosene gave *N,N-diethylpseudoheliotridylamine*, b_5 87–9°, d_4^{20} 0.9147, n_D^{20} 1.4764, $[\alpha]_D$ −3.5°. Piperidine gave *1-(pseudoheliotridyl)piperidine*, b_5 124°, d_4^{20} 0.9620, n_D^{20} 1.4980, $[\alpha]_D$ −4.82°. $PhNH_2$ similarly gave *N-phenylpseudoheliotridylamine*, m. 76–7°, best isolated as the *di-HCl salt*, m. 213–14° (from EtOH contg. dry HCl). I and PhOH with KOH after 6 hrs. at 170° in a N atm. gave *pseudoheliotridyl Ph ether*, b_5 153–3°, d_4^{20} 1.0521, n_D^{20} 1.5400; *picrate*, m. 164–5° (from EtOH). For successful reaction of the amine with I, it is necessary to use a large excess of amine to prevent polymerization of I. G. M. Kosolapoff

Synthetic studies in the series of alkaloids of Ipecacuanha and the quinine tree. N. A. Preobrazhenskii, R. P. Evstigneeva, T. S. Levchenko, and K. M. Fedyushkina. *Doklady Akad. Nauk S.S.S.R.* 81, 421–3(1951).—Further development of the alkaloid synthesis from glutaconates (cf. *C.A.* 45, 7877*e*) extended the method to the formation of emetine-like, piperidine derivs., such as meroquinine, homomeroquinine, and their dihydro derivs. Condensation of di-Et glutaconate with EtI and $NCCH_2CO_2Et$ in the presence of EtONa gave *di-Et β-(1-cyano-1-carbethoxypropyl)glutarate*, b_5 160–2°, which, after saponif. and decarboxylation, gave *di-Et β-(1-cyanopropyl)glutarate*, b_5 135–7°. This on reductive condensation with homoveratrylamine over a Ni catalyst gave *Et 1-homoveratryl-5-ethyl-2-oxo-4-piperidineacetate*, $b_{0.5}$ 213–14°, which, cyclized with the aid of $POCl_3$ in hot MePh, gave *6',5'-dimethoxy-6-ethylhexahydro-7-(carbethoxymethyl)(1,2:1'2')benzoquinolizinium chloride* (I), which after transformation to the *iodide*, m. 257–8°, was hydrogenated over Pt oxide in EtOH to *Et 6',5'-dimethoxy-6-ethyl-3,4,5,6,7,8-hexahydro(1,2:1',2')-benzoquinolizine-7-acetate; HCl salt*, m. 195–6°. Condensation of this with homoveratrylamine, ring closure, and hydrogenation gave mixed *stereoisomers of emetine base*. The solid isomer after conversion through salts with various org. acids (unstated) gave the *di-base*, whose *d-tartaric acid salt*, m. 150–61.5°, was identical with the *d-tartrate* of natural *l-emetine*, and the identity of the 2 bases themselves was also proven. Catalytic reduction of the substituted glutarate (above) without homoveratrylamine gave *Et 6-ethyl-2-oxo-4-piperidineacetate*, $b_{0.5}$ 130–6°, which after saponif. and reduction with Na-EtOH yielded *cincholeipon*. Alkylation of the condensation product of di-Et glutaconate with $NCCH_2CO_2Et$ with the appropriate org. halide gave *tri-Et β-(1-cyano-1-carbethoxy-3-dimethylaminopropyl)glutarate*, b_5 155–62°, n_D^{20} 1.4608, d_4^{20} 1.0930, which yields *Et 6-(3-dimethylaminoethyl)-2-oxo-4-piperidineacetate*, either through *di-Et β-(1-cyano-3-dimethylaminopropyl)glutarate*, b_5 152–8°, or through *6-carbethoxymethyl-5-carbethoxy-5-(2-dimethylaminoethyl)-2-piperidone*, $b_{0.5}$ 102–4°. Reduction and cleavage of Me_2NH yields *meroquinine*. For the synthesis of homomeroquinine, the glutaconate is replaced



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by the *dl-Et dihydromuconate*, bp 120–4°, obtained by treating Et crotonate with *N*-bromosuccinimide to yield $BrCH_2CH:CHCO_2Et$, which is condensed with $CH_2(CO_2Et)_2$, and the product after saponif. and decarboxylation yields dihydromuconic acid, which is esterified. The synthesis indicates a path toward *quinine* synthesis.

G. M. Kosolapoff

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PREOBRAZHENSKIY, N. A.

USSR/Chemistry - Alkaloids

21 Nov 51

"Synthetic Research in the Series of Alkaloids of Ipecac and Cinchona," N. A. Preobrazhenskiy, R. P. Yevstigneyeva, T. S. Levchenko, K. M. Fedyushkina

"Dok Ak Nauk SSSR" Vol LXXXI, No 3, pp 421-423

The steps in the synthesis of substances leading to alkaloids of the emetine group had been described. Glutaconic acid ester and alkyl-substd cyanoacetic esters were the starting materials. Also presents a parallel scheme for a synthesis starting with the diethyl ester of alpha, beta-dihydromuconic acid. This opens the way to the synthesis of quinine over homoeroquinene. In

214T18

general the procedures described permit syntheses of compds contg meroquinene and homomeriquinene groupings (also of corresponding dihydro compds), thus leading to ipeacaenanna and cinchona alkaloids.

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PREOBRAZHENSKIY, N. A.

USSR/Chemistry - Alkaloids Dec 51

"A New Method of Synthesizing Alkaloids of the Pilocarpine Group," N. A. Preobrazhenskiy, M. E. Maurit, G. V. Smirnov

"Dok Ak Nauk SSSR" Vol LXXXI, No 4, pp 613-616

A compd already having elements corresponding to the 3, 4, and 5 positions of the imidizole group has an alkyl group substituted in the 5 position. This compd is then reacted with an alkylthioisocyanate to give the 1, 5-disubstituted imidizole compd. This is a new reaction leading to pilocarpine alkaloids. It is protected by a 1949 USSR author's certificate.

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