USSR/Engineering - Tools

Card : 1/1

Authors : Kuzovkin, N. G.

Title : New cut-off tool

Periodical : Vest. Mash. 34/5, 55, May 1954

Abstract : A new type of tool with the cutting edge divided into two parts at an angle of 120 degrees is described. The exact dimensions and configuration of this tool are given. Table; drawings.

Institution : ....

Submitted : ....

ACC NR: AT6020474 (A) SOURCE CODE: UR/0000/65/000/000/0074/0079

AUTHOR: Kuzovkin, S. K. (L'vov)

ORG: none

TITLE: On the feasibility of phase measurement in inductive aerial electrical prospecting

SOURCE: AN UkrSSR. Teoriya i elementy sistem otbora geofizicheskoy informatsii (Theory and elements of systems for selecting geophysical information). Kiev, Naukova dumka, 1965, 74-79

TOPIC TAGS: prospecting, phase measurement

ABSTRACT: The paper discusses the dependence of the phase of the secondary field on the frequency of the excitation current and the dimensions and the conductivity of a buried ore body. The author shows that the phase of the secondary field does not depend on flight altitude. The least errors occur in the phase measurement when the plane of the gondola is at a 0° or 90° angle to the vertical plane. The horizontal component of the field is measured when this angle is 45°. Orig. art. has: 8 formulas, 2 figures.

SUB CODE: 08/ SUBM DATE: 10Nov65/ ORIG REF: 003

Card 1/1

ACC NR: AT6020476 (A) SOURCE CODE: UR/0000/65/000/000/0084/0089

AUTHOR: Kuzovkin, S. K. (L'vov)

ORG: none

TITLE: Evaluation of two procedures for the electrical compensation of the primary signal in aerial induction prospecting

SOURCE: AN UkrSSR. Teoriya i elementy sistem otbora geofizicheskoy informatsii (Theory and elements of systems for selecting geophysical information). Kiev, Naukova-dumka, 1965, 84-89

TOPIC TAGS: phase shift analysis, prospecting

ABSTRACT: In the first procedure, the intensity and phase of compensation remain the same throughout the survey; in the second, the phase remains the same but the intensity is automatically equalized to the intensity of the signal received. Losses in the intensity, which are due to a disruption of the geometry of the system of the transmitting and receiving coils, are calculated in percentages. The second method of compensation for such losses has some definite advantages over the first since the compensated signal is very nearly the true one, even though the geometry of the coil system may have been disrupted by as much as 17-20%. Had the first method of compensation been used, the intensity of the signal would have been changed by 4.5 times. In general,

Card 1/2

ACC NR: AT6020476

the errors are proportional to the parameters of the signal. Orig. art. has: 3 tables, 2 figures.

SUB CODE: 08,09/ SUBM DATE: 10Nov65/ ORIG REF: 004

Card 2/2

S/651/62/000/006/010/010
E140/E135

AUTHORS: Blazhkevich, B.I., and Kuzovkin, S.K.

TITLE: Comparison of electrical methods of compensating the primary signal in induction aerial surveys

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Instytut mashynoznavstva i avtomatyky, L'viv. Avtomaticheskiy kontrol' i izmeritel'naya tekhnika. no.6. 1962. 174-183.

TEXT: Because of safety considerations and because of the additional indeterminacy introduced by variations of mutual attitude, it is difficult to obtain large distances between the generator and receiver in aerial geophysical surveys using the method of induced earth currents, where the receiver is suspended in a trailing gondola. Hence a comparative study was made at the Institut mashinovedeniya i avtomatiki AN USSR (Institute of Science of Machines and Automation, AS Ukr.SSR) of two methods of direct electrical compensation of the effect of the primary signal: compensation of the primary signal alone; compensation of the resultant signal. It was found that the first permits more accurate detection of the useful signal, while the second has the

Card 1/2

required accuracy only for small phase shifts between the primary and resultant signals. A combination of the two methods permits the real and imaginary components of the secondary signal to be measured without the need for phase detectors. Unfortunately, due to the variations of attitude already noted, no method appears to eliminate the error to a satisfactory degree.
There are 2 figures.

Card 2/2

BLAZHKEVICH, B.I., kand. tekhn. nauk, otv. red.; MIKHAYLOVSKIY, V.N., red.; SVENSON, A.N., kand. tekhn. nauk, red.; MIZYUK, L.Ya., kand. tekhn. nauk, red.; KUZOVKIN, S.K., glav. inzh., red.; BELICHENKO, A.I., ved.inzh., red.; SABANEYEV, R.D., red.izd-va; RAKHLINA, N.P., tekhn.red.

[Apparatus for electric prospecting by air; its design and operation] Apparatura aeroelektrorazvedki; proektirovanie i ekspluatatsiia. Kiev, Izd-vo AN Ukr.SSR, 1963. 155 p. (MIRA 17:2)

1. Akademiya nauk URSR. Kiev. Instytut mashynoznavstva ta avtomatyky, Lvov. 2. Chlen-korrespondent AN Ukr. SSR (for Mikhaylovskiy).

KUZOVKIN, S.K.

Effective method of electric compensation of the primary signal in the aerial inductive method. Izv. AN SSSR. Ser. geofiz. no.10: 1540-1543 O '63. (MIRA 16:12)

1. Institut mashinovedeniya i avtomatiki AN UkrSSR.

KUZOVKIN, S.K.

Quantitative determination of interferences from changes in the geometry of a system of some variants of the inductive method of aero-electric prospecting. Izv. AN SSSR Ser. geofiz. no.10:1513-1521 O '64. (MIRA 17:11)

1. Institut mashinovedeniya i avtomatiki AN UkrSSR.

KUZOVKIN, V.; ZISLIN, L.

Compressor of the GAZ-66 motortruck. Avt. transp. 43 no.9:42 S '65. (MIRA 18:9)

ADESTOV, G.N.; BORISOV, V.I.; DVORYANINOV, N.V.; DUBKOV, V.B.; KUZOVKIN, V.N.; MIKHAYLOV, S.B.; TUZHILKIN, V.G.; CHERNOMASHINTSEV, A.I.; SHIKHOV, B.N.; YAKUBOVICH, I.Ye.; UL'YANETSKIY, A.M., nauchn. red.; PROSVIRIN, A.D., otv. red.; MONAKHOVA, N.F., red.; KOGAN, F.L., tekhn. red.

["Motor vehicles of the U.S.S.R." catalog; the GAZ-51, GAZ-51A, GAZ-63 and GAZ-63A motortrucks; structural changes and the interchangeability of parts and units] Katalog-spravochnik "Avtomobili SSSR: avtomobili GAZ-51, GAZ-51A, GAZ-63, GAZ-63A; konstruktivnye izmeneniia i vzaimozamenia-emost' detalei, uzlov i agregatov. Moskva, 1963. 74 p. (MIRA 16:12)

1. Moscow. TSentral'nyy institut nauchno-tekhnicheskoy informatsii po avtomatizatsii i mashinostroyeniyu. 2. Glavnyy konstruktor Gor'kovskogo avtomobil'nogo zavoda (for Prosvirin).

(Motortrucks—Catalogs)

KUZOVKIN, Ye.M.

Isolation of Toxoplasma strains from swine. Trudy Inst. zool. AN Kazakh. SSR 19:47-48 '63. (MIRA 16:9)
(Toxoplasma)

GALUZO, I.G.; LEVIT, A.V.; NOVINSKAYA, V.F.; GOLOSOV, V.I.; GORBUNOVA, Z.I.; KUZOVKIN, Ye.M.

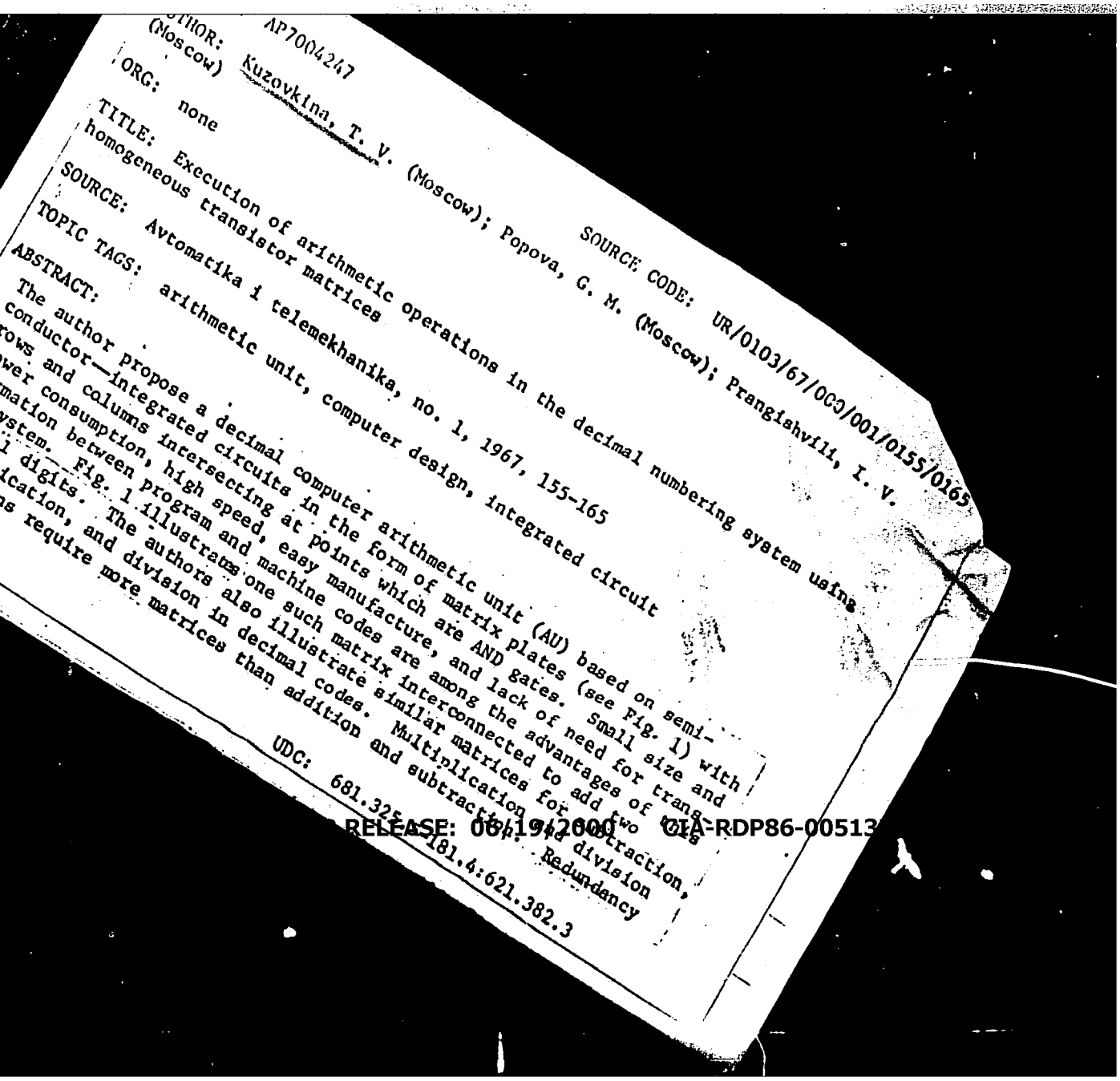
Epizootiological foundations of the natural foci of toxoplasmosis. Trudy Inst. zool. AN Kazakh. SSR 22:27-33 '64.

(MIRA 17:12)

RATNER, Ye.I.; SMIRNOV, A.M.; KHUAN KHUN-SHU [Huang Hung-shu]; UKHINA, S.F.; KUZOVKINA, I.N.

Assimilation of amino acids as a source of nitrogen by isolated alfalfa roots and by entire pea plants in sterile cultures. Fiziol. rast. 10 no. 6:673-681 N-D '63. (MIRA 17:1)

1. K.A. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sviences, Moscow.



AP7004247

SOURCE CODE: UR/0103/67/000/001/0155/0165

AUTHOR: Kuzovkina, T. V. (Moscow); Popova, G. M. (Moscow); Prangishvili, I. V. (Moscow)

ORG: none

TITLE: Execution of arithmetic operations in the decimal numbering system using homogeneous transistor matrices

SOURCE: Avtomatika i telemekhanika, no. 1, 1967, 155-165

TOPIC TAGS: arithmetic unit, computer design, integrated circuit

ABSTRACT:

The author propose a decimal computer arithmetic unit (AU) based on semiconductor—integrated circuits in the form of matrix plates (see Fig. 1) with rows and columns intersecting at points which are AND gates. Small size and wer consumption, high speed, easy manufacture, and lack of need for trang mation between program and machine codes are among the advantages of this ystem. Fig. 1 illustrates one such matrix interconnected to add two digits. The authors also illustrate similar matrices for subtraction, ication, and division in decimal codes. Multiplication and division s require more matrices than addition and subtraction. Redundancy

UDC: 681.325.181.4:621.382.3

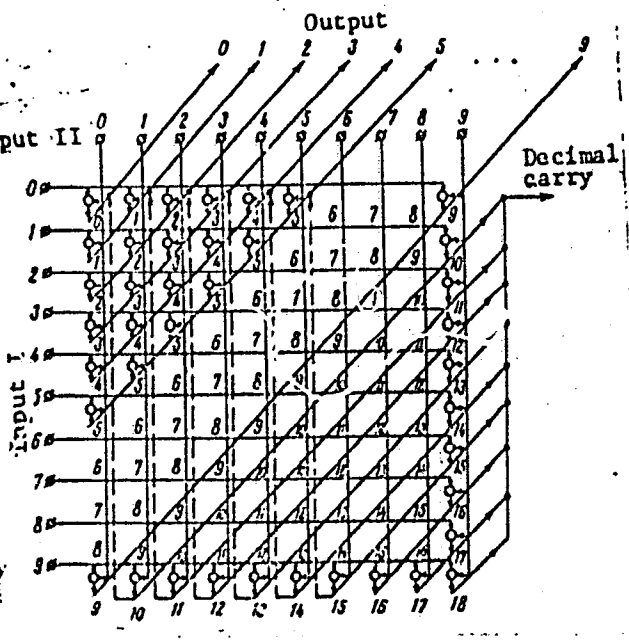


Fig. 1. Addition matrix

ACC NR: AP7004247

measures are easily built into these matrices, which may be designed to have more than 10 rows and 10 columns. If any row or column fails it may be rapidly interchanged with a spare row or column. Orig. art. has: 9 figures. [WA-81] [BD]

SUB CODE: 09/ SUBM DATE: 23Feb66/ ORIG REF: 002/ OTH REF: 002/ ATD PRESS: 5115

Card 3/3

KUZOVKOV, A.A.

Group production lines without machine readjustment. Avt.trakt. prom.no.9:18-24 S'55. (MLRA 8:12)

1. Yaroslavskiy avtozavod (Automobile industry)

S/122/61/000/002/011/011
A161/A126

AUTHOR: Kuzovkov, A. A., Engineer

TITLE: Technological principles of multi-part (group) machine tool lines for machining different parts without resetting

PERIODICAL: Vestnik mashinostroyeniya, no. 2, 1961, 77 - 82

TEXT: The article presents a theoretical consideration of general operation principles of a flow-line of machine tools for simultaneous machining of a number (group) of different machine parts without resettings. It is stated that the idea attracts the attention of machine-builders since long. Generally, the parts in a group must have common geometrical features, be of similar metal, and require similar surface finish. The idea of geometrical similarity is shown in a group of six gears, and the idea of the line work in a chart naming the machine tools and showing the sequence of 16 operations. Formulae are included for calculating the number of parts that can be produced simultaneously to obtain the wanted output quantity. The calculations are accompanied by a flow-line plan and a graph with a curve series plotted to facilitate calculations. It is proved that a line

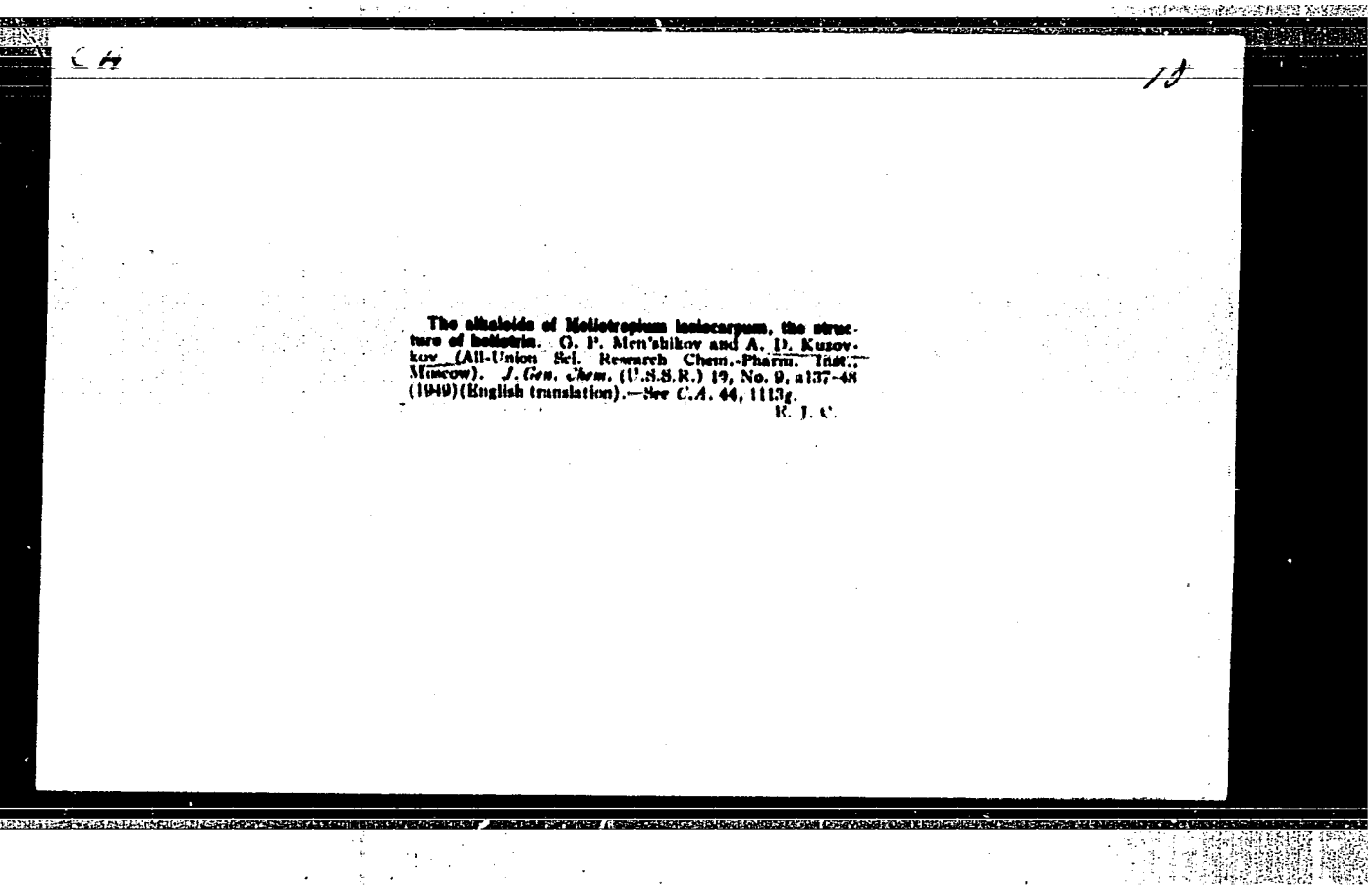
Card 1/2

S/122/61/000/002/011/011
A161/A126

Technological principles of multi-part ....

needing no resettings would reduce the machining time by 30 - 40 %, speed up greatly the production cycle, and reduce expenditures for equipment and production costs. There are 4 figures and 1 Soviet-bloc reference.

Card 2/2



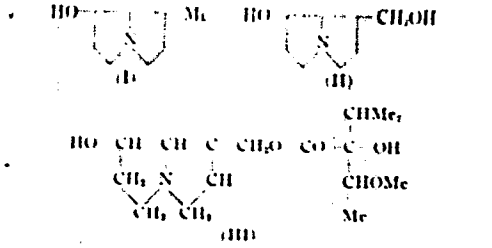
C A

19

The alkaloids of Heliotropium lasiocarpum, the structure of heliotrin. G. P. Men'shikov and A. D. Kuzovkov (All-Union Sci. Research Chem.-Pharm. Inst., Moscow). *J. Gen. Chem.* (U.S.S.R.) 19, No. 9, 1137-48 (1949)(English translation).—See *C.A.* 44, 1113g.

R. J. C.

Alkaloids of Heliotropium lasiocarpum. O. P. Men'shikov and A. D. Kuzovkov. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 10, 1502 (1940).—Oxidation of *hydroxyheliotridan* ($C_8H_{15}ON$) with CrO_3-AcOH yields an *amino ketone*, $C_8H_{13}ON$, shown to be identical with tetronecanal; *semicarbazone*, m. 230° (from EtOH); *oxime*, m. 165-7° (after sublimation in vacuo); *picrate*, m. 195° (from EtOH). Hence, *hydroxyheliotridan* has the structure I. Reduction of heliotrophine with H over Raney Ni at normal temp. and pressure gave *dihydroxyheliotridan*, m. 76-7° (from Me_2CO), $[\alpha]_D$ −24°; *picrate*, m. 157-8°, used for purification of the free base, $C_8H_{17}O_2N$, which with 0.5 mole BzCl in $CHCl_3$ yielded a *mono-Bz deriv.*, m. 133 4° (from Me_2CO), $[\alpha]_D$ −5.08°, whose *picrate* m. 134-5° (from EtOH, followed by drying at 80°). The mono-Bz deriv. (2.5 g.) treated in the cold with 5 g. pure $SOCl_2$, then warmed 1 hr. on a steam bath, concd., and fractionally pptd. by Me_2CO-Et_2O in the form of the HCl salts, gave upon treatment with picric acid (after NH_4OH treatment) a *picrate*, m. 146-7° (from EtOH), of the base $C_{15}H_{19}O_2N$, which gave the *HCl salt*, m. 147-8° (from Me_2CO), and upon hydrogenation in EtOH over Pt catalyst gave *isoretronecanol*, after hydrolysis of the Bz residue. The above facts fix the location of the 2 HO groups of heliotridine. Treatment of 6 g. heliotrine with 15 g. cold $SOCl_2$, followed by 1.5 hrs. on a steam bath, evapn., addn. in 4% HCl, evapn. in vacuo, and reduction by 75 g. $CrCl_2$·6H_2O, 75 g. Hg, Zn, and concd. HCl at 130-40° gave *supinidine*, isolated as the *picrate*, m. 142-3°, and *methiodide*, m. 112-14°; [α]D −10.01° (in MeOH); the residual soln. gave *heliotronic acid*. Hence, the structure of *heliotridine* is II and that of *heliotrine* is III.



(I) (II)

(III)

G. M. Kosolapoff

CA

10

Alkaloids of Nanophyton erinaceum. A. D. Kuzovkov and G. P. Men'shikov (S. Ordzhonikidze All-Union Chem.-Pharm. Inst., Moscow). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 20, 1634-7(1950).—The upper parts of the plant yielded on steam distn. with added NaOH a total of 0.1% *1-2,6-dimethylpiperidine* [*HCl salt*, m. 253-4° (from EtOH); *free base*, b. 133-5°, d_4^{20} 0.8400, n_D^{20} 1.4442, α_D −13.8°], and *1-1,2,6-trimethylpiperidine*, b. 153-4°, d_4^{20} 0.8148, n_D^{20} 1.4485, α_D −43.02° (*HCl salt*, m. 102.5-4.0°). Heating the 1st product with AgOAc and aq. AcOH to 180° gave *2,6-dimethylpyridine*, b. 142-3°, *picrate*, m. 150-60°; *chloroaurate*, m. 125-6°; *phthalate*, m. 117-19°. Methylation of the 1st product by HCO_2H and 30% aq. CH_2O gave an *HCl salt*, m. 102.5-4.0°, identical with the material obtained from the 2nd alkaloid above, i.e. the 1,2,6-tri-Me deriv.

G. M. Kosolapoff

USSR/Chemistry - Antimalarials Dec 51

"Syntheses in the Pseudohelliotridane Series," A. D. Kuzovkov, G. P. Men'shikov, Phytochem Lab, All-Union Sci Res Chemicopharm Inst imeni S. Ordzhonikidze

"Zhur Obshch Khim" Vol XXI, No 12, pp 2245-2248

Following earlier work on synthesis of plasmoquine analogue contg pseudohelliotridane group, synthesized by reactions of chloropseudohelliotridane with appropriate amines or Kphenolate: methyl-benzyl-, β-ethanol-, octyl-, methyl-octyl-, diethyl-, and

PA 194T71

194T71

USSR/Chemistry - Antimalarials (Contd) Dec 51

phenyl-pseudohelliotridylamines, N-pseudohelliotridyl-piperidine, and pseudohelliotridyl-phenyl ester. Characterizes above compds. Discusses reaction conditions.

194T71

KUZOVKOV A. D.

KUZOVKOV, A. D.

Chem Abs
v. 48 25 Jan 54

Organic Chem

Alkaloids of the plant Stizolophus balsamita. A. D. Kuzovkov, P. S. Massagetov, and R. I. Bogomazova (S. Ordzhonikidze All-Union Chem.-Pharm. Inst., Moscow). *Zhur. Obshchei Khim.* 23, 157–8(1953); cf. *ibid.* 18, 1736 (1948).—Extn. of 4.6 kg. of upper plant parts as described in preceding abstr. gave 12 g. *stizolophine*, $C_{14}H_{21}NO_4$, m. 122–3° (from $CHCl_3$). Aq. solns. have pH 8.8. Solns. in dil. mineral acids are unstable and acquire red color most of its salts are amorphous, but the *salicylate*, m. 187–8° (from Me_2CO), and the *viridiflorinate*, m. 168–9° (from Me_2CO), are cryst. The base has one NMe group; $[\alpha]_D$ 24.6° (EtOH). The material has a weak pharmacologic action. *Centaurea macrocephala* yields some 0.3% mixed uncrystallizable bases; *C. iguarrosa* contains 0.12% mixed unknown bases.

G. M. Kosolapoff

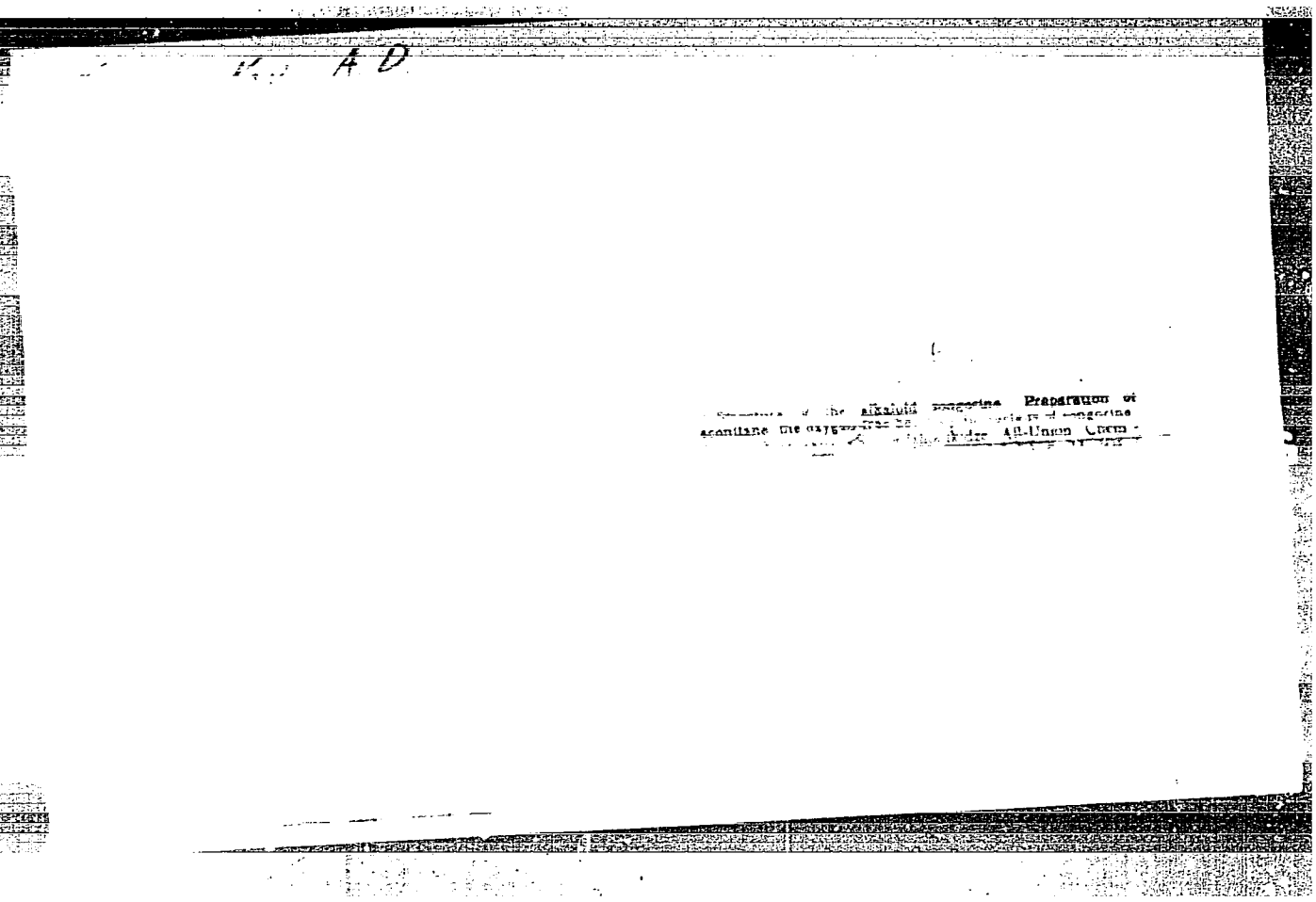
KUZOVKOV, A. D.

Chem. Abs
1-48 25 Jan 54

Organic Chem

(5)

Alkaloids of plants Nardigenia laevigata. P. S. Massagetov and A. D. Kuzovkov (S. Ordzhonikidze All-Union Chem.-Pharm. Inst., Moscow). *Zhur. Obshchei Khim.* 23, 156-61(1953).—Extn. of 23 kg. of dried plant extd. as in second preceding abstr. gave 43 g. bases insol. in H_2O and 19 g. bases sol. readily in $CHCl_3$. Extn. of the former group with Me_2CO gave 25 g. *senecionine*, $C_{18}H_{25}O_5N$, m. 238° (from $CHCl_3$), $[\alpha]_D$ −61.5°. Its *picrate*, m. 191°; *nitrate*, m. 214° (from EtOH). Hydrolysis with hot $Ba(OH)_2$ gave the same *acid*, m. 148-8.5°, that had been obtained on hydrolysis of *platyphylline* (cf. Konovalova and Orekhov, *ibid.* 8, 301(1938); Barger and Blackie, *C.A.* 30, 6095⁹). The acid forms a *lactone*, m. 135-6°. The other product of hydrolysis is *retronecine*, m. 119-20°, $[\alpha]_D$ 56.9°; *HCl salt*, m. 163-4°. The Me_2CO mother liquor after removal of the above alkaloid was concd. yielding 20 g. *platyphylline*, m. 127-8°) *bitartrate*, m. 198-9°; $[\alpha]_D$ −27.5°; *picrate*, m. 197-8° (cf. Orekhov, *et al.*, *C.A.* 29, 4016⁴, 7988⁵). The H_2O-sol. bases rubbed with Me_2CO gave an unstated amt. of a 3rd alkaloid, identified as *renardine*, m. 193-5°; *bitartrate*, m. 201° (cf. Danilova and Konovalova, *C.A.* 45, 2960a).



KUZOVKOV, A. D.

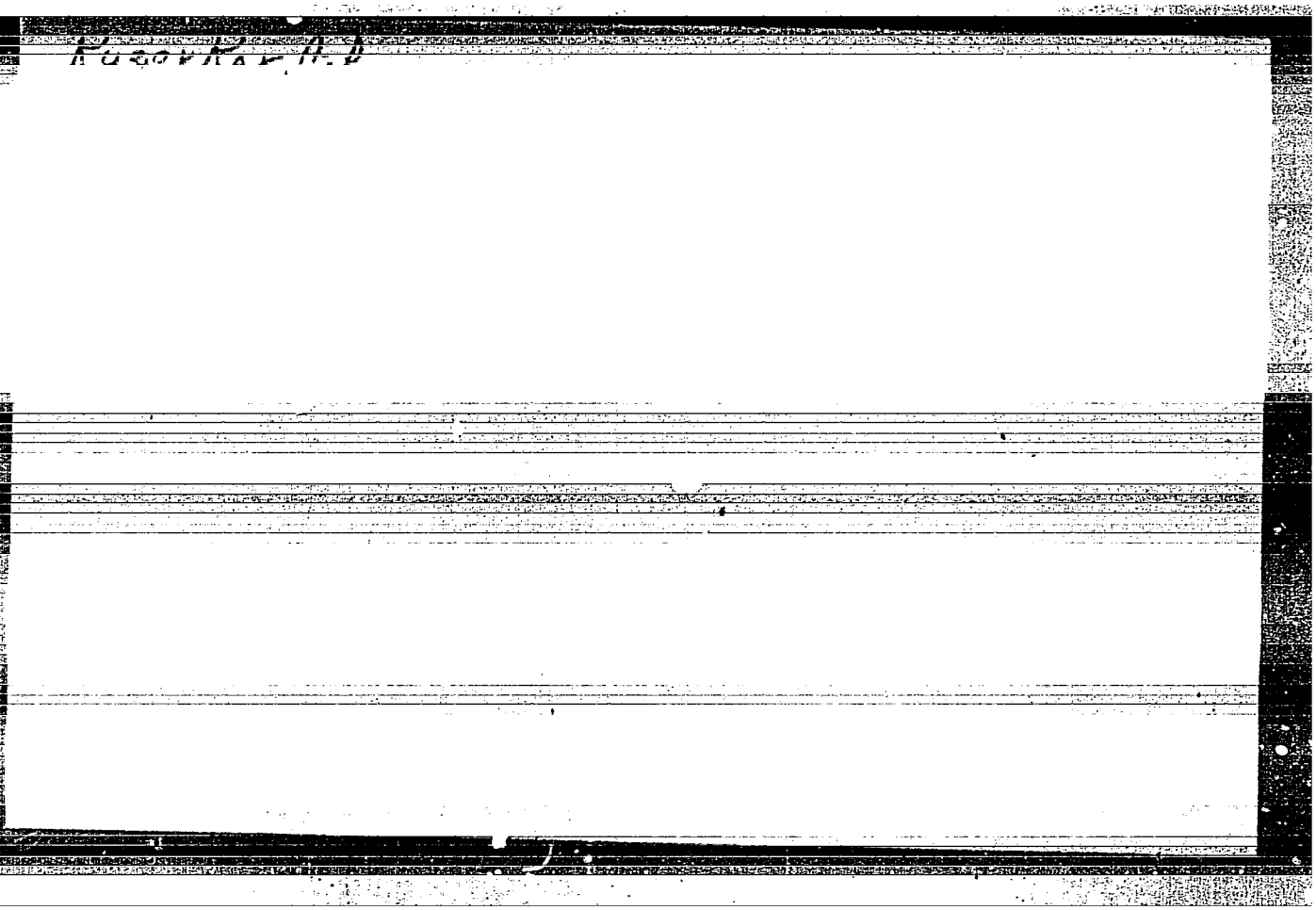
Chemical Abst.
Vol. 48
Apr. 10, 1954
Organic Chemistry

Alkaloids of plants, Leontice eversmannii. I. New alkaloid taspine and alkaloid isoleontine. Preparation of leontidane and isoleontane. T. F. Platonova, A. D. Kuzovkov, and P. S. Massagetov (S. Ordzhonikidze All-Union Chem.-Pharm. Inst., Moscow). *Zhur. Obshchei Khim.* 23, 880-6(1953).—Extn. of the upper parts of *L. eversmannii* with $(CH_2Cl)_2$ in the presence of 10% NH_4OH and treatment of the ext. with 15% H_2SO_4 gave a ppt. of *taspine* (I) sulfate, purified by crystn. from 10% AcOH; the yield was 0.18% of the plant wt. The acidic filtrate, made alk. with NH_4OH with cooling and extd. with $CHCl_3$, yielded 0.56% (on plant wt.) mixed bases as a dark oil. This (830 g.) in 500 ml. Me_2CO acidified to Congo red with alc. HCl gave 270 g. *leontidine-HCl*, m. 293° (from EtOH). The mother liquor after evapn. was distd. *in vacuo*, yielding: *pachycarpine*, isolated as the *HI salt*, m. 233-4°; *l-lupanine-HI*, m. 189-90° (*perchlorate*, m. 212-13°, $[\alpha]_D$ −47.8°); *isoleontine*, isolated as the *picrate*, m. 177-9°; and *leontidine-HCl*, m. 310-11°. I sulfate with 10% NH_4OH and $CHCl_3$ gave, on addn. of Me_2CO to the org. ext., the free *base*, $C_{20}H_{19}O_6N$ of I, m. 370°, optically inactive; *methiodide* monohydrate, needles (from H_2O). Hydrolysis of I with boiling [illegible] N NaOH in 15 min. gave an *amino acid*, $C_{20}H_{[illegible]}O_{[illegible]}N.H_2O$ [illegible] group, since on heating with [illegible] it forms I. I contains 2 MeO, 1 O-CH_2-O, and a NMe_2 groups. I sulfate, I.0.5H_2SO_4.H_2O, m. 360° (from H_2O). *Leontidine-HCl*, m. 310-11° (from EtOH), with NaOH gave free *leontidine*, $C_{15}H_{22}ON_2$ (II), m. 118-19° (from C_6H_6-Et_2O), $[\alpha]_D$ −102.2° (MeOH). On hydrogenation over PtO_2 II takes up 4.2 moles H, yielding an oily product which gave the *HI salt*, m. 219-20°, $[\alpha]_D$ 10.33°. This new base is $C_{15}H_{26}N_2$, *leontidane* (III), oil, b_3 141-4°, $[\alpha]_D$ −7.78° (without solvent). II therefore is not a sparteine-group alkaloid and is based on O-free III, which is a homolog of sparteine differing from it by a CH_2 group. This indicates further that *leontamine* is $C_{14}H_{24}N_2$. III forms a *sulfate*, m. 229-30°; *di-HI salt*, decomp. 263°; *perchlorate*, m. 234°, $[\alpha]_D$ 20.55°. Isoleontine picrate treated with 18% HCl, washed with dil. HCl and the acid soln. treated with NaOH after removal of picric acid gave free *isoleontine*, $C_{15}H_{24}ON_2$ (IV), b_3 175-90°, m. 107-8 (from Et_2O), $[\alpha]_D$ −78.2° (EtOH): *perchlorate*, decomp.

(over)

2/2 Platonova, T. F., et al

252° (from H_2O); *methiodide*, decomp. 287°; *picrate*, m. 177-9°. On hydrogenation of IV over Pt O_2, IV took up 1.9 moles H_2 and gave an optically active product devoid of secondary N atoms, $C_{15}H_{28}N_2$, m 7°, $[\alpha]_D$ −30.1° (EtOH); *picrate*, m. 256° (with decompn.); *di-HCl salt monohydrate*, m. 368° (with sublimation); *methiodide*, decomp. 292° (from dil. EtOH). G. M. K.



KUZOVKOV, A.

Sep 53

USSR/Chemistry - Alkaloids

"Investigation of Alkaloids of the Senecio Species. IX. Structure of Alkaloids from Senecio sarracenius," A. Danilova and A. Kuzovkov, All-Union Scientific Research Chemo-Pharmaceutical Inst im S. Ordzhonikidze, Moscow

Zhur Obshch Khim, Vol 23, No 9, pp 1597-1600

It was established that the new alkaloids sarracine and N-oxide of sarracine, isolated from Senecio sarracenius, are diesters of the aminoglycol platinecine with cis-(angelic) acid and an unsaturated acid with the composition $C_5H_8O_3$, designated sarracinic acid. The latter acid has the carbon frame of methylethyl-acetic acid, differing from it by the presence of a hydroxy-group and a double bond.

260T35

PROSKURNINA, N.F.; KUZOVKOV, A.D.; ROBIONOV, V.M., akademik.

Investigation of alkaloids from Sophora pachycarpa. Structure of sephocarpine and sepheramine. Dokl.AN SSSR 91 no.5:1145-1146 Ag '53. (MLRA 6:8)

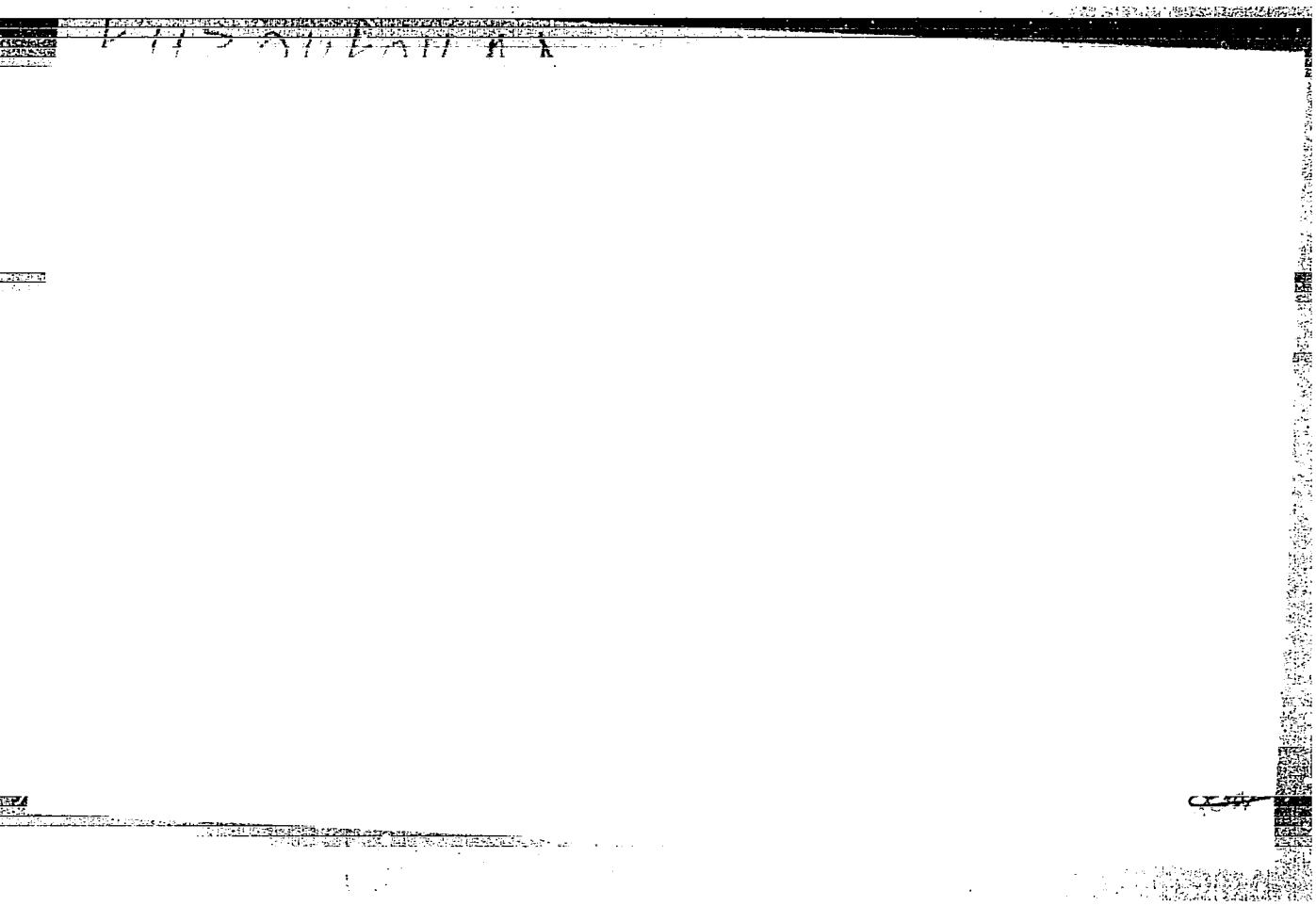
1. Akademiya nauk SSSR (for Robionov). 2. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im. S.Ordzhonikidze (for Preskurnina and Kuzovkov). (Alkaloids) (Sophora pachycarpa)

Kuzovkov, A. D.

Alkaloids of plants of Leontice ewersmannii. II. Products of decomposition of thaspine. T. F. Platonova and A. D. Kuzovkov (S. Ordzhonikidze All-Union Sci. Research Chem. Pharm. Inst., Moscow). *Zhur. Obshchei Khim.* 24, 2240–50(1954); cf. *C.A.* 48, 12758f.—Distn. of thaspine with Zn dust in H gave fluorene and a mixt. of amines, from which was isolated a *picrate*, m. 225–6° (from EtOH), corresponding to $C_9H_{13}O_9N_4$. Fusion of thaspine with KOH gave *2,3,x,x'-tetrahydroxybiphenyl*, m. 217.5–18.5°; methylation with CH_3N_2 gave a *tetramethoxybiphenyl*, m. 100.5–1.5°, and some *trimethoxyhydroxybiphenyl*, m. 127.5–8.5°. Acetylation of the tetra-HO compd. with AcCl gave the *tetra-Ac deriv.*, m. 87–8.5°, which oxidized with CrO_3-AcOH to 2,3-dihydroxybenzoic acid, m. 205–6°. Distn. of the tetra-HO compd. with Zn dust gave Ph_2. Refluxing thaspine with HBr (d. 1.48) 3 hrs. gave *thaspinaic acid HBr salt*, decomp. 298°, $C_{11}H_{16}O_3NBr$; *free acid*, amorphous. Oxidation of the free acid with $KMnO_4$-H_2SO_4 gave *β-dimethylaminopropionic acid* (I), m. 143–4° [*HCl salt*, m. 185–8°; *reineckate*, m. 164–75°; *Et ester*, b_{18} 62–4° (*HCl salt*, m. 143–6°; *methiodide*, m. 176°)]. Thus thaspinaic acid, as possibly thaspine, has a MeO-NCH_2CH_2 side-chain. Thus the alkaloid is $C_6H_3(OMe)_2$-$(CH_2O_2)(CO_2)N(Me)_2$. The oxidation of thaspinaic acid, described above, gives directly the Et ester of I, which can be saponified to I with 5% NaOH at 100°.

G. M. Kosolapoff

(1)

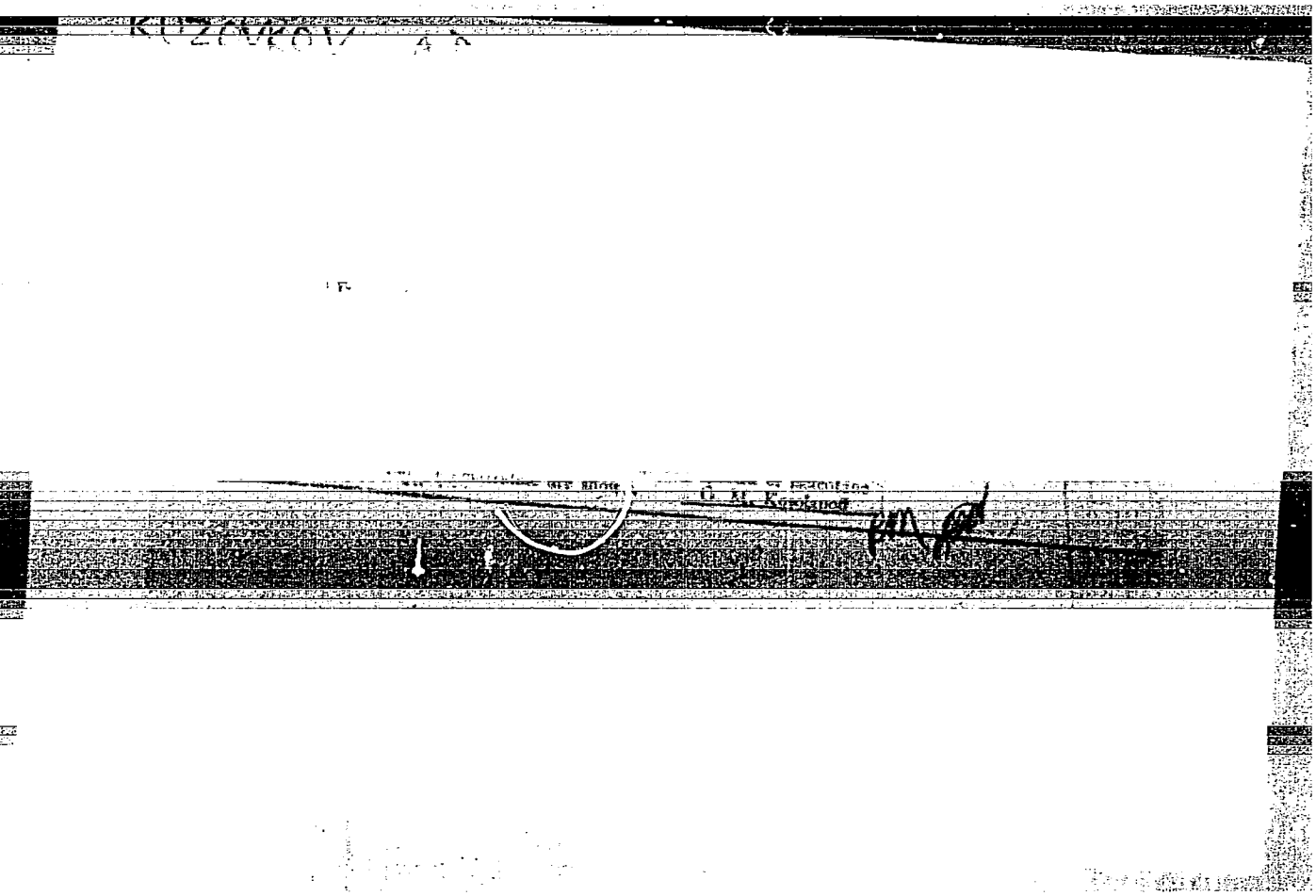


APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928230003-4"

KUZOVKOV, A.D.

Study of aconite alkaloids. Part 6.Conversion of methyllycaconitine into delsemine. Zhur. ob.khim. 25 no.12:2345-2347 D '55.(MIRA 9:4)

1.Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
(Lycaconitine) (Delsemine)



Kuzovkov, A D

Aconite alkaloids. VI. Transformation of methyllycaconitine into delsemine. A. D. Kuzovkov (S. Ordzhonikidze All-Union Chem. Pharm. Research Inst., Moscow). *Zhur. Obshchei Khim.* 25, 2345–7(1955); cf. Yunusov, *et al.*, *C.A.* 47, 7515*e*; 49, 5495*i*; 50, 8995*d*.—Grinding methyllycaconitine (I) perchlorate with aq. NH_4OH (12%), extg. with Et_2O, and letting the ext. stand in contact with 12% NH_4OH 4 days gave 68% delsemine (II). The same reaction takes place in $CHCl_3$ in contact with aq. NH_4OH, as it does in alc. NH_4OH. Thus I may yield II in the usual process of alkaloid extn.

G. M. Kosolapoff

KUZOVKOV, A.D.

Study of aconite alkaloids. Part 4. Study of the configuration of the alkaloid elatin. Zhur.ob.khim. 25 no.2:422-424 F '55.
(MLRA 8:6)

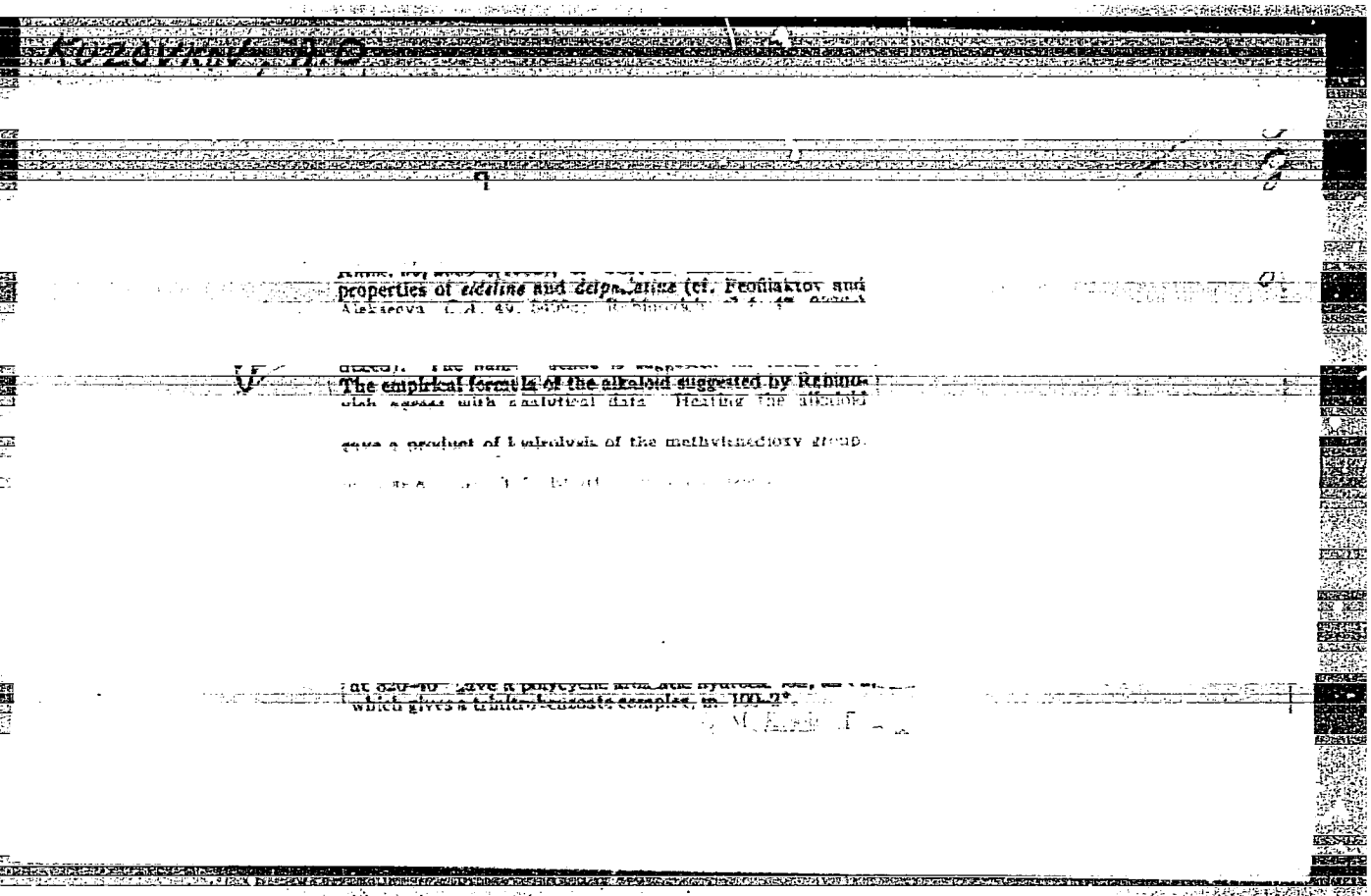
1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
(Alkaloids) (Larkspur)

KUZOVKOV, A.D.

Study of aconite alkaloids. Part 5. Configuration of the carbon skeleton of songorin. Zhur.ob.khim. 25 no.10:2006-2009 O '55. (MLRA 9:2)

1.Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.

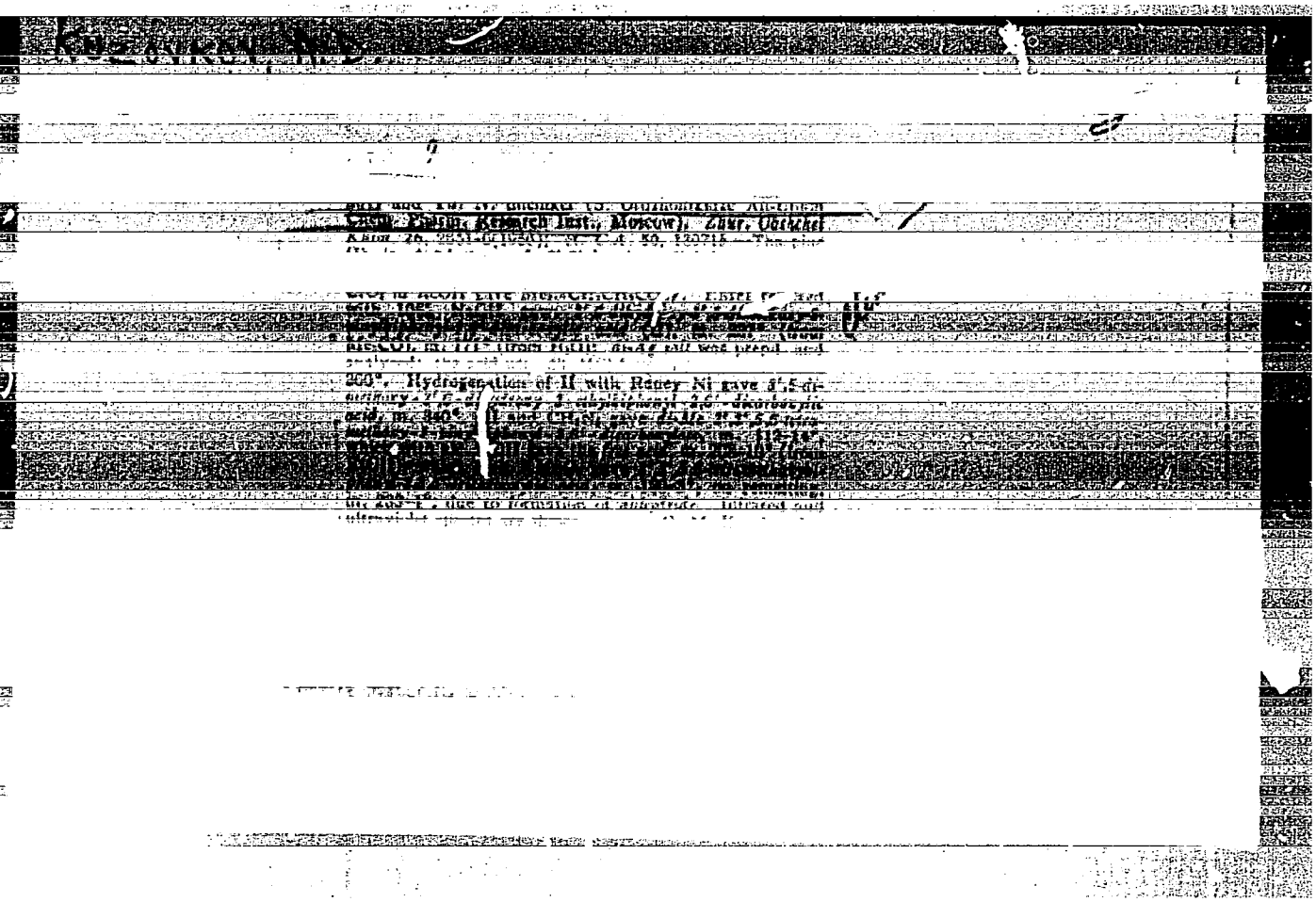
(Alkaloids) (Aconite)



properties of *eldeline* and *delphinine* (cf. Proshlyakov and
Alekseeva [illegible]

The empirical formula of the alkaloid suggested by Reynolds
[illegible] agrees with analytical data. Heating the alcohol
gave a product of hydrolysis of the methylenedioxy group.

at 320–40° gave a polycyclic aromatic hydrocarbon, mp
which gives a trinitro-derivative, mp 190–2°.



KUZOVKOV, A.D.; MASSAGEMOV, P.S.; RABINOVICH, M.S.

Study of aconite alkaloids. Part 2. Alkaloids of the plant Delphinium dictiocarpum D.C. Zhur.ob.khim.25 no.1:157-160 Ja '55. (MIRA 8:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
(Alkaloids) (Larkspur)

KUZOVKOV, A.D.; MASSAGETOV, P.S.

Study of alkaloids. Part 3. Alkaloids of the plant Aconitum orientale Mill. Zhur.ob.khim.25 no.1:178-181 Ja '55. (MIRA 8:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im. S.Ordzhonikidze.
(Alkaloids) (Aconite)

Aconite alkaloids. IV. Structure of the alkaloid elatine. S. D. Tyzykov (S. Ordzhonikidze All-Union Sci. Research Chem.-Pharm. Inst., Moscow). *Zhur. Obshchei Khim.* 25, [illegible]; *J. Gen. Chem. U.S.S.R.* 25, 388–400 (1955) (Engl. translation); cf. *C.A.* 50, 1852c.—Hydrolysis of elatine with alc. aq. NaOH 0.5 hr. at reflux gave solid *elatinic acid*, m. 150–60°, undepressed when mixed with *methylsuccinylanthranilic acid* obtained from methyllycaconitine. Hydrolysis of this acid with hot 10% HCl 1.5 hrs. gave anthranilic acid and methylsuccinic acid. The other product of hydrolysis of elatine was *eletidine*, m. 168.5–71.5°. This, hydrolyzed with 1:1 HCl at 80° in the presence of phloroglucinol 2 hrs., gave *lycetonine*, m. 181.5–3.5°. Thus eletidine differs from lycoctonine by the presence of a methylenedioxy group instead of the two HO groups. Thus elatine is a *N*-substituted imide of methylsuccinic acid, although a further definition of structure cannot be made from the existing data. G. M. Kosolapoff

Kuznetsov, A.D.

USSR/Chemistry - Pharmaceuticals

Card 1/1 Pub. 22 - 21/45

Authors : Kuznetsov, A. D.; Mashkovskiy, M. D.; Danilova, A. V.; and Men'shikova, G.P.

Title : Synthesis of pseudoheliotridane and heliotridane

Periodical : Dok. AN SSSR 103/2, 251-252, Jul 11, 1955

Abstract : The synthesis of curare-like compounds - pseudoheliotridane and heliotridane - is briefly described. The medicinal properties of these compounds are listed. Four references: 3 USSR and 1 USA (1923-1952).

Institution : All-Union Sc.Res.Chem.Pharm. Inst. im. S. Ordzhonikidze

Presented by : Academician I. N. Nazarov, February 21, 1955

Chem 4

Alkaloids of plants of the poppy family. T. F. Platonova, P. S. Massagetov, A. D. Kuzovkov, and L. M. Utkin (S. Ordzhonikidze All-Union Chem.-Pharm. Sci. Research Inst., Moscow). *Zhur. Obshchei Khim.* 20, 173-80; *J. Gen. Chem. U.S.S.R.* 20, 181 6(1950)(Engl translation).- Conventional NH_4OH (CH_2Cl_2) treatment of 14 kg. dried roots of *Fumaria schleicheri* gave 23 g. Et_2O-sol. alkaloids which were solid and 26 g. noncryst. material, while 17 g. noncryst. material was extd. with $CHCl_3$. Chromatography of the 1st group in $CHCl_3$ over Al_2O_3 with elution by $CHCl_3$-2% MeOH gave 5 g. protopine, m. 205-6° (from the colorless zone), 0.2 g. tarry material from the orange zone. The yellow zone gave a mixt., which on rechromatographing with elution with $CHCl_3$ and MeOH gave 3 g. protopine and 2 g. *fumaridine*, yellow solid, m. 190-1°, $C_{19}H_{19}O_4N$, which has 2 MeO and 2 MeN groups; *tartrate*, m. 217°; *di-HCl salt*, m. 213-14°; *picrate*, m. 204-5°; *methiodide*, m. 247-8°. The MeOH-sol. fractions yielded 1.2 g. *fumaramine*, $C_{19}H_{19}O_4N$, m. 223-4°, which has 2 *N*-Me groups; *tartrate*, m. 200°; *HBr salt*, m. 253-60°. Similar chromatography of the noncryst. material gave 0.78 g. *fumarinine*, $C_{18}H_{19}O_4N$, m. 189-90° (contains 1 *N*-Me group) (*oxalate*, m. 213°; *HCl salt*, m. 255-7°), some protopine, and 0.3 g. *fumariline*, $C_{18}H_{19}O_3N$, m. 157-9° (contains 1 *N*-Me group) (*HCl salt*, m. 224°; *HBr salt*, m. 219°). Ultraviolet spectra of the new alkaloids were examd.; fumaramine apparently contains a carbonyl group as does fumaridine; the latter may be the di-Me ether of the former. Similar treatment of roots of *F. micrantha* yielded protopine, fumaramine, and unidentified material. Roots of *F. wirtgenii* gave protopine, fumaridine, and the colorless chromatographic zone yielded

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PLATONOVA, T. MASSAGETOV, P. . . . .

tuntaline, $C_{20}H_{19}O_4N$, m. 180.5-1.5° (from Me_2CO), $[\alpha]_D$ −44.4° (*HCl salt*, m. 212°), which contains 2 MeO groups and is norphenolic. *Papaver hybridum* gave 0.12% total alkaloids from which was isolated 0.01% *pahybrine* *di-HBr salt*, decomp. 204° (from H_2O), $[\alpha]_D$ 44.6°; *free base*, $C_{20}H_{21}O_4N$, yellow amorphous solid (*HI salt*, decomp. 200°). *Papaver hybrid* gave 0.8% alkaloids, from which some protopine was isolated. Along with the new *roemeridine*, $C_{19}H_{19}O_4N$, m. 228-30°, which contains HO and 3 MeO groups; *HCl salt*, m. 258-60°. An unknown alkaloid, m. 230°, was also found. *P. paeoninum* gave 0.1% total alkaloids which yielded protopine, *a*-allocryptopine (m. 157-9°), and *roemeridine*, m. 226-8°. *Chelidonium majus* gave 0.7% total alkaloids from which were isolated (through the sulfates): sanguinarine, m. 240-2°; chelerythrine, m. 210-13°; *chelidamine*, $C_{11}H_{11}O_4N$, m. 204-5°, $[\alpha]_D$ −318.9° (*HCl salt*, m. 254-6°; *methiodide*, m. 275°). Some protopine was isolated from the mother liquor after removal of chelidamine from MeOH-$CHCl_3$ soln., and finally some *chelidonine*, m. 133°, $[\alpha]_D$ 110°, $C_{20}H_{19}O_4N$; *HCl salt*, m. 295°.

G. M. Kosolapoff

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Kuzovkov A. P.

(Engl. translation); cf. C.A. 50, 9434i; Yunusov, C.A. [illegible] Conventional extn. of the plant with $CHCl_3$ [illegible]

[illegible]

95–6°. The cryst. mixt. of alkaloids, after sepn. of [illegible]

[illegible]

pptd. after soln. in 5% H_2SO_4 by gradual addn. of NaOH, yielding from the less basic component 10 g. [illegible]

is about 0.01%. It is apparently O-acetyl[illegible]

PLATONOVA, T.F.; KUZOVKOV, A.D.

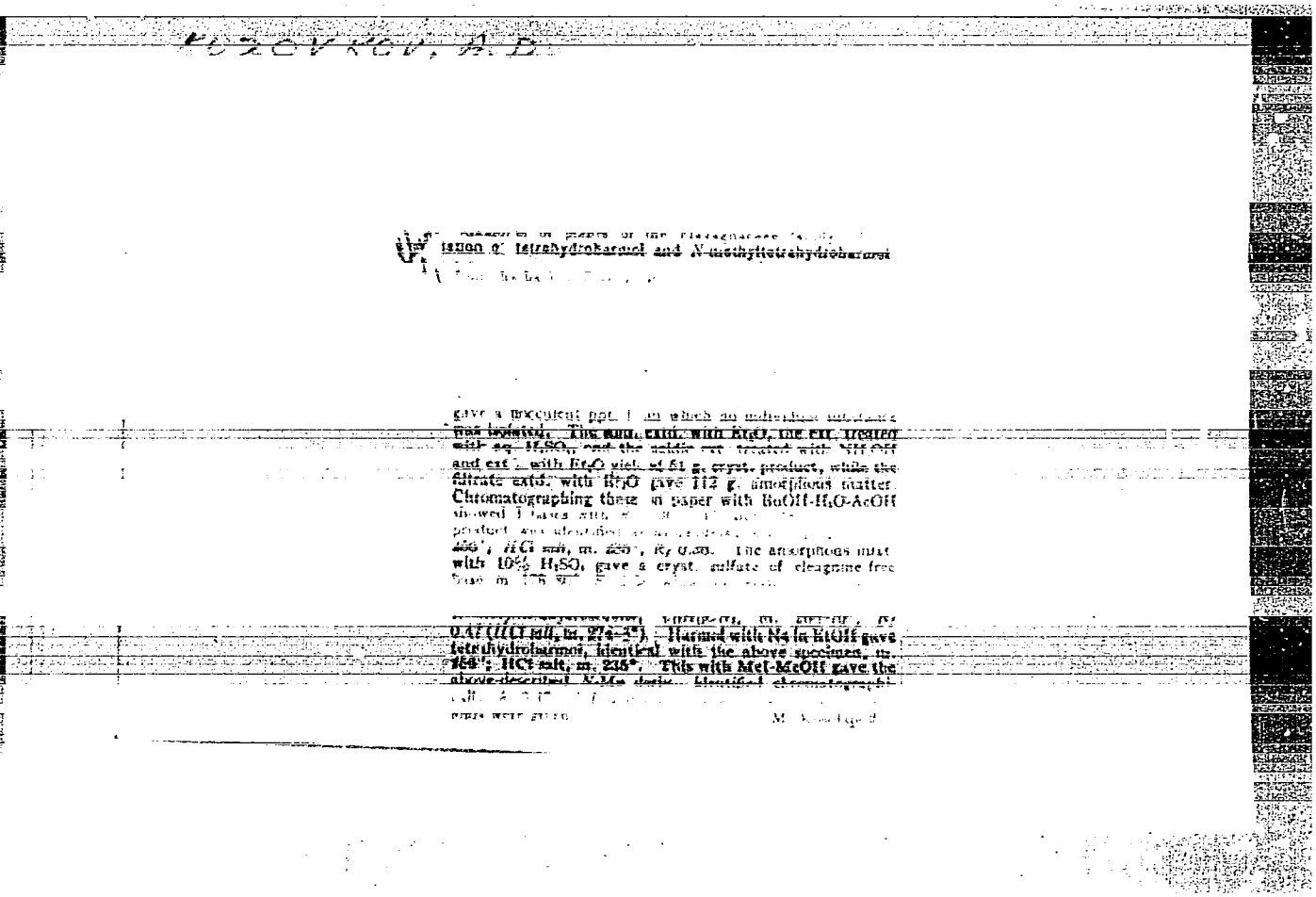
Alkaloids from Leontice eversmannii Bge. Part 3. Leontine. Structure of the heterocyclic ring. Zhur.ob.khim. 26 no.1: 283-285 Ja '56. (MLRA 9:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(Alkaloids) (Leontica)

KUKOVKOV, A.D.

Study of aconite alkaloids. Part 8. Identity of delphelatine with eldeline. Zhur.ob.khim. 26 no.7:2063-2066 Jl '56.
(MIRA 9:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(Alkaloids) (Larkspur)



KUZOVKOV, A. D.

Preparation for treatment of nervous disorders. USSR Patent 105,502. May 25 1957. POZORTSEVA-KURBANOVA, P. M., MASHKOVSKIY, M. D., MASSAGETOV, KUZOVKOV, A. D., RABINOVICH, M. S., and KRYSHOVA, N. A.

A curarelike prepn. (Elatin) which is an alkaloid of the compn. $C_{38}H_{50}O_{10}N_8$ obtained from Delphinium elatum, is used for treatment of nervous disorders.

Kuzovkov, A. D.

79-1-56/63

AUTHORS: Platonova, T. F., Kuzovkov, A. D., Massagetov, P. S.

TITLE: Investigation of Aconite Alkaloids (Issledovaniye akonitovykh alkaloidov) IX. On the Alkaloids of Aconitum excelsum (IX. Ob alkaloidakh Aconitum excelsum)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol.28, Nr 1, pp.258-261 (USSR)

ABSTRACT: The alkaloids of the plant Aconitum excelsum Rehb. were investigated by S. Y. Yunusov in whose report a short indication to the isolation of mesaconitine and two bases. These bases were characterized by the melting points (265 - 267° and about 100°C). The authors investigated the roots of the plant. The material was collected in Tyan'Shane in fall after the dying of their upper parts. The present sample contained about 3 % alkaloid mixture whose chromatographic investigation on paper only indicated three products (R_b 0,66 , 0,49 and 0,38). By splitting up the mixture it was possible to liberate lappaconitine (Rf 0,66) and two new alkaloids (R_b 0,74 and 0,76) which it was not possible to determine chromatographically and for whom the names aksin and aksinatin were suggested. The

Card 1/2

79-1-56/63

Investigation of Aconite Alkaloids. IX. On the Alkaloids of Aconitum excelsum

dry roots contain 0,016 % aksin and 0,002 % aksinatin. In this manner the investigated material contained at least five bases. The products R_b 0,49 and 0,38 could not be separated as such. Aksin, $C_{21}H_{29}O_5N$, contains two alcohol groups and one acetoxy group and apparently also a single ether bond. Aksinatin, $C_{21}H_{27}O_4N$, has an alcohol and a keto group and, like aksin, also an acetoxy group. By saponification of the latter amino alcohols were obtained from both, accordingly - aksinidine, $C_{19}H_{27}O_4N$, and aksinatidine, $C_{19}H_{25}O_3N$. The superterrestrial parts of the plant which were collected in the pre-flowering-time contained 0,5 % of the noncrystalline alkaloid sum; by paper chromatography of the sum three products were determined (R_b 0,64, 0,49, 0,38), from which only lappaconitine (0,06 %) could be liberated. There are 2 references, all of which are Slavic.

ASSOCIATION: All-Union Scientific Chemical-Pharmaceutical Institute imeni S. Ordzhonikidze (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze)

SUBMITTED: January 8, 1957
AVAILABLE: Library of Congress
Card 2/2 1. Chemistry 2. Flora-Chemical analysis

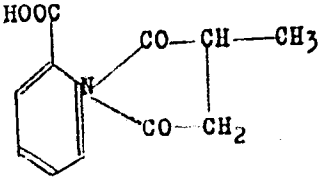
KUZOVKOV, A D.

AUTHORS: Kuzovkov, A. D., Bocharnikova, A. V. 79-2-62/64

TITLE: The Investigation of Aconite-Alkaloids (Issledovaniye akonitovykh alkaloidov). X. "Elatine". The Structure of Etherifying Acid (X. Elatin. Stroyeniye eterifitsiruyushchey kisloty).

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 556-558 (USSR)

ABSTRACT: It was published already in a preceding work that the carboxyls of the methyl succinic acid and the nitrogen of the anthranilic acid form a grouping of the N-substituted methyl succinimide in the elatine molecule. Proceeding from this assumption the formula for "elatine" was fixed. This is confirmed by the present work. On the occasion of the reduction of elatine, elatidine and 2-/N-(3-methyl pyrrolidine)/-benzyl-alcohol were obtained. The latter is formed by the reduction cleavage of an ether compound and to reduction of two carbonyls of the methyl succinyl group to the methyl group from which two amide carbonyls of the acid quoted in the title can be concluded which have the following structural formula: HOOC



Simultaneously with the present work Cookson et al. (ref. 5) found this structural formula on the basis of spectroscopic investigations. The alkaloids methyl licaconitine and elatine apparently differ from each other only

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The Investigation of Aconite-Alkaloids. X."Elatine". 79-2-62/64
The Structure of Etherifying Acid.

by the fact that the latter has a methyldioxy group instead of the glycol group of the methyl licaconitine. Both show similar pharmacological properties which, however, are not due to the presence of the succinimide group, for also "delsemine", "avarharidine", and ajacine have similar effects (according to the data of the co-operators of the Federal Institute for Scientific Chemical and Pharmaceutical Investigations P. M. Dozortseva). The presence of the group mentioned last,however,explains the sensitivity to ammonia; thus, methyl licaconitine changes into delsemine. Also the extraction of the first two alkaloids improves if soda isused instead of ammonia (with elatine from delphinium elatum from 0,03 to 0,15% and the hydriodide of methyl licaconitine from delphinium dictyocarpum D. C. to 0,7%). The method of preparation and specific data are given.There are 10 references, 7 of which are Slavic.

ASSOCIATION: All-Union Scientific Research Institute for Chemistry and Pharmacy imeni S. Ordzhonikidze (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im. S. Ordzhonikidze).

SUBMITTED: February 7, 1957
AVAILABLE: Library of Congress
Card 2/2

KUZOVKOV, A. D.,

AUTHOR: Kuzovkov, A. D., 79-2-63/64

TITLE: The Investigation of Aconite-Alkaloids (Issledovaniye akonitovykh alkaloidov). XI. The Oxidation of Hydrocarbon $C_{18}H_{18}$ Forming in the Dehydrogenation of "Zongorine" (XI. Okisleniye uglevodoroda $C_{18}H_{18}$ obrazuyushchegosya pri degidrirovanii zongorina).

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 558-560 (USSR)

ABSTRACT: In order to determine the position of alkyl groups $C_{18}H_{18}$ was oxidized with potassium ferricyanide under the same conditions under which Ruzhichka (ref. 3) oxidized retene. On this occasion also two acids were obtained the methyl esters of which were isolated. The results of the investigations showed that these were the methyl esters of diphenyl tetracarbo-xylic -2,3, 2',4',- acid and the ester of phenantrene tricarboxylic acid. This was also confirmed by ultra-violet spectra and infrared spectra respectively. The results of oxidation confirmed the assumption published already earlier in technical literature that the hydrocarbon $C_{18}H_{18}$ is trialkyl phenanthrene. Moreover, it could be observed that the alkyl groups are in position 1,7 and 9 or 10 of the phenanthrene nucleus, for this is the only possibility to obtain the above acids in the case of oxidation.

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The Investigation of Aconite-Alkaloids. XI. The Oxidation of Hydrocarbon $C_{18}H_{18}$ Forming in the Dehydrogenation of "Zongorine". 79-2-63/64

Up to now no phenanthrene hydrocarbons with substituents in the 9 or 1o position were found among the hydroganation derivatives of the aconite alkaloids. The alkyl groups in the 9 or 1o position indicate the presence of a substituent in the corresponding nucleus of "zongorine" or that the nucleus is 7- or 8-membered ⊢——⊣ and thus may change into 6-membered aromatics with new alkyl groups on the occasion of hydrogenation. There are 1 figure, 5 references, 2 of which are Slavic.

ASSOCIATION: All-Union Scientific Research Institute for Chemistry and Pharmacy imeni S. Ordzhonikidze (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im. S. Ordzhonikidze).

SUBMITTED: March 16, 1957

AVAILABLE: Library of Congress

Card 2/2

SOV/79-28-8-61/66

AUTHOR: Kuzovkov, A. D.

TITLE: Investigations on the Aconital Alkaloids (Issledovaniye akonitovykh alkaloidov) XII. The Structure of the Hydrocarbon $C_{18}H_{18}$ and a Possible Formula for Songorin (XII. Stroyeniye uglevodoroda $C_{18}H_{18}$ i vozmozhnaya formula zongorina)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 8, pp. 2283 - 2288 (USSR)

ABSTRACT: The author had earlier (Ref 1) obtained the hydrocarbon $C_{18}H_{18}$ by dehydrogenating songorin with selenium. He accomplished this synthesis by the reactions in diagram 1. By dehydrating tertiary alcohols formed by the Grignard reaction it is possible to obtain a mixture of isomers which differ in respect to the position of the double bond. In this case it is possible after the cyclization and the subsequent dehydration to form not only the 1,10-dimethyl-7-ethylphenanthrene, as the diagram indicates, but also 1,10-dimethyl-5-ethylphenanthrene. The product separated out by the author after the dehydration was found to be identical with the hydrocarbon $C_{18}H_{18}$ which formed from

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the dehydration of songorin. The position of the ethyl group at the 7th carbon atom had been ascertained previously (Ref,2) by oxidizing the hydrocarbon $C_{18}H_{18}$ to diphenyl tetracarbonic acid 2,3,2',4'. The 1-bromo-2-o-tolylpropane was made from o-xylol (Diagram 4). Cyclohexanone-1,3, whose synthesis is described in the literature (Diagram 3), was used as the starting product in synthesizing 1-ethylcyclohexanone-3. The cyclohexadione reacts in the Grignard reaction as the enol form (Diagram 4). 1-Ethylcyclohexanone-3, which is characterized as a semicarbazone, was obtained by the hydrogenation of cyclohexone using a nickel skeleton catalyst. The determination of the structure of $C_{18}H_{18}$ allowed generalizations about certain properties of songorin to be made and led to a few considerations on the structure of this alkaloid, which, on the basis of the analytical data, showed that either of the formulae $C_{21}H_{29}O_3N$ or $C_{22}H_{31}O_3N$ was possible. It had been reported that the alkaloid napollin had been split into napellin and napellonin, and since the properties of this last compound are very similar to those

Investigations on the Aconital Alkaloids. XII. The Structure of the Hydrocarbon $C_{18}H_{18}$ and a Possible Formula for Songorin SOV/79-28-8-61/66

of songorin it was possible to decide upon the formula on this basis. The hypothetical formula (I) was proposed for napellonin (Ref 8), and this indicated that formula (I) is the proper one for songorin. Nevertheless, formula (II) was more in accord with the results of the dehydrogenation of the songorin, and the author accepted this formula in preference to formula (I). There are 9 references, 4 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemical-Pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: July 1, 1957

Card 3/4

Investigations on the Aconital Alkaloids. XII. The Structure of the Hydrocarbon $C_{18}H_{18}$ and a Possible Formula for Songorin SOV/79-28-8-61/66

Card 4/4

SOV/79-28-11-50/55

AUTHORS: Platonova, T. F., Kuzovkov, A. D., Massagetov, P. S.

TITLE: Investigation of the Aconite Alkaloids (Issledovaniye akonitovykh alkaloidov) XIII. Alkaloid Aconitum Rotundifolium Kar. et Kir. and Aconitum Nemorum M. Pop. (XIII. Alkaloidy Aconitum rotundifolium Kar. et Kir. i Aconitum nemorum M. Pop.)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 11, pp 3126-3128 (USSR)

ABSTRACT: The orbicular-leaf aconite (Aconitum rotundifolium Kar. et Kir.) is a small perennial plant with two tubers and pale-lilac flowers. The underground parts of it were collected during blossom in August and September in the central part of Tyan'-Shan for the purpose of separating the alkaloids. The dried plant consisted of about 0.15 % alkaloids. In the mixture four bases were found by paper chromatography. In the aluminum oxide chromatography alkaloids of the empirical formulae $C_{27}H_{31}O_6N$ and $C_{26}H_{34}O_2N_2$ were separated from the mixture. The forest aconite (Aconitum nemorum M. Pop.) is a perennial grass-type plant with blue flowers and a little chain of

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Investigation of the Aconite Alkaloids. XIII. Alkaloid Aconitum Rotundifolium Kar. et Kir. and Aconitum Nemorum M. Pop. SOV/79-28-11-50/55

tubers grown together. For the investigation the whole plants were collected in August during the blossom in the Tyan'-Shan, in the area of Lake Son-Kul'. The dried plant contained 0.2 % alkaloids. Two bases found in the mixture by paper chromatography they turned out to be talat isamine (Ref 2) and monoacetyl talat isamine. The latter was also obtained by the acetylation of the former (Ref 3); it had never before been found in plants. There are 3 Soviet references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemo-Pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: October 15, 1957

Card 2/2

AUTHORS: Platonova, T. F., Kuzovkov, A. D., Massagetov, P. S. SOV/79-28-11-51/55

TITLE: Alkaloids of Plants of the Family Chenopodiaceae (Goosefoot) (Alkaloidy rasteniy semeystva Chenopodiaceae (marevyye)) Anabasis Jaxartica and Arthrophytum Leptocladum (Anabasis jaxartica i Arthrophytum leptocladum)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 11, pp 3128-3131 (USSR)

ABSTRACT: Anabasis jaxartica (Bge.) Benth. is a 2o-3o cm high, perennial plant, which grows in the salt plains of the Syr-Dar'ya river. The dry plant contains 0.16 % alkaloids. In alkaloid mixtures four bases were produced by paper chromatography (R_f 0.80, 0.41, 0.17). In the separation, depending on the basicity, it was possible to separate 2 bases, Nr 1 (R_f 0.33) and Nr 2 (R_f 0.41). The substances with the denominations R_f 0.80 and 0.17 on the chromatogram yield weak stains and obviously are contained in the plant in only small quantities. Base Nr 1 corresponds to the formula $C_9H_{13}ON$; it is water soluble and is dyed with iron chloride. In the infrared spectrum the fol-

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Alkaloids of Plants of the Family Chenopodiaceae (Goosefoot). Anabasis Jaxartica and Arthrophytum Leptocladum

lowing absorption bands can be seen: 3.0 μ (a weak band, (NH)), 3.8 μ (a double band, hybrid ion), 6.2 μ (a double band, conjugated bonds). Their nitrogen is of secondary type. The composition and the properties of base Nr 1 as well as the constants of its salts correspond rather exactly to those of N-methyl-4-oxy-β-phenyl-ethyl amine (Table 1) which never before had been found on plants, although its methyl derivative (hordenine - Ref 2) has been long known. The base Nr 2 $C_{10}H_{15}ON$ differs from base Nr 1 by the group CH_2. Its spectrum differs very little from that of base Nr 1. The authors called this new base Jaxartinin. From Arthrophytum leptocladum M. Pop. N. K. Yurashevskiy (Ref 3) obtained dipterine, leptocladine, and N-methyl-β-phenyl-ethyl amine. It contained 3.7 % bases. The authors succeeded in additionally separating the base $C_{12}H_{14}N_2$ which has an NCH_3 group. One of the nitrogen atoms is of basic character. This base with an excess hydrochloric acid forms a chlorine monohydrate. Its infrared spectrum points to an associated NH-group. The ultraviolet spectrum is

Alkaloids of Plants of the Family Chenopodiaceae (Goosefoot). Anabasis Jaxartica and Arthrophytum Leptocladum

identical with that of indole. Based on the above said as well as on the similarity of the constants of the obtained base and its salts with those of 3-methyl-1,2,3,4-tetrahydro-β-carbinol (Ref 4, Table 2) they can be regardad as identical. This carbinol had never before been found in plants. There are 2 tables and 5 references, 2 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze
(All-Union Scientific Chemo-Pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: October 15, 1957

SOV/79-28-11-52/55

AUTHORS: Platonova, T. F., Kuzovkov, A. D., Massagetov, P. S.

TITLE: On the Alkaloids of the Plants of the Family Asclepiadaceae (Milkweed) (Ob alkaloidakh rasteniy sem. Asclepiadaceae (lastovnevykh)) I. Antitoxicum Funebre (Boiss. et Ky.) Pobed. (I. Antitoxicum funebre (Boiss. et. Ky.) Pobed.)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 11, pp 3131-3133 (USSR)

ABSTRACT: The content of alkaloids of the plant family Asclepiadaceae is low. The authors report on the separation of two alkaloids (Ref 1), the tylophorine $C_{24}H_{27}O_4N$ and the tylophorinine $C_{23}H_{27}O_4N$ from the plant Tilophora asthmatica Wigt a. Arn., as well as of the nicotine from the Asclepias syriaca (Ref 2). Of the 40 types of this plant family growing in the USSR only 2, the Cynanchum acutum and the L. Vincetoxicum sibiricum have been investigated until now; no alkaloids were found in them (Ref 4). The great interest for alkaloids of the plant family Apocynaceae and the botanical similarity with that of the Asclepiadaceae caused the authors to investigate

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On the Alkaloids of the Plants of the Family Asclepiadaceae (Milkweed). I. Antitoxicum Funebre (Boiss. et Ky.) Pobed.

the alkaloids of the latter. Antitoxicum funebre (Boiss. et Ky.) is a plant of a height of 40-70 cm. It grows on rocky slopes and unfertile places. The plants collected in the Caucasus in dried state contained 0.26 % alkaloids. In the paper chromatography the bases R_f 0.45 and 0.33 were found among others, in the aluminum oxide chromatography the base $C_{23}H_{25}O_3N$ (R_f 0.45), which has three OCH_3 groups. In the infrared spectrum the bands of the lactam carboniles and of the groups OH and NH are not present. The alkaloid hitherto not described was given the name antofine. Besides, two bases were separated in very small yields with only their melting points being determined. There are 5 references, 4 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemo-Pharmaceutical Research Institute imeni S. Ordzhonikidze)

KUZOVKOV, A.D.; PLATONOVA, T.F.

Possible structure of the alkaloid kondelfin. Med.prom. 13 no.9: 12-13 S '59. (MIRA 13:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(ALKALOIDS)

5 (3)
AUTHOR: Kuzovkov, A. D.

SOV/79-29-5-68/75

TITLE: Investigation of Aconite Alkaloids (Issledovaniye akonitovykh alkaloidov). 14. On the Structure of the "Zongorine" Alkaloid (14. O stroyenii alkaloida zongorina)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 5, pp 1728 - 1737 (USSR)

ABSTRACT: "Zongorine" and "Napellonine", which was produced by Professor K. Wiesner, are identical. The author thanks K. Wiesner for having put a sample of "Napellonine" at his disposal. The formula for "Zongorine" given earlier is confirmed by new data. The following was found in the "Zongorine" molecule: an allyl alcohol group, a saturated substituted piperidine ring, a CH_2-group in position 16 and a CH-group in position 17. There is probably also a keto group of "Zongorine" in position 8 Derivatives of "Zongorine" were not cleaved according to the Hofmann reaction. There are 11 references, 3 of which are Soviet.

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SOV/79-29-5-68/75

Investigation of Aconite Alkaloids.
14. On the Structure of the "Zongorine" Alkaloid

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemico-pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED: March 21, 1958

Card 2/2

SOV/79-29-8-75/81

5(3)

AUTHORS: Kuzovkov, A. D., Platonova, T. F.

TITLE: Investigation of the Aconite Alkaloids. XV. On the Structures of Elatine, Methyl Licaconitine, Ajacine, Delsemine, Awadcharidine, Licaconitine, and Eldeline

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 8, pp 2782 - 2786 (USSR).

ABSTRACT: Of the otherwise well investigated polyhydroxylated alkaloids of the plant genera Aconitum and Delphinium the structures of methyl licaconitine, ajacine, delsemine, awadcharidine, and licaconitine which are esters of licoctonine (I) had until recently remained unknown, since it had not been known which of the three hydroxyl groups in them is subjected to an esterification when the ester is formed. In the authors' opinion the question can be solved on the basis of the previously obtained data and the material collected by them experimentally, although on a small scale. For the alkaloid elatine (Ref 4), as an ester of the acid (II), the authors suggest the formula (IV), for its amino alcohol, elatidine, the formula (III). By transformation of the elatidine into anthranoyllicoctonine

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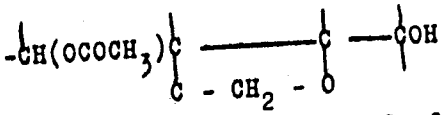
Investigation of the Aconite Alkaloids. XV. On the Structures of Elatine, Methyl Licaconitine, Ajacine, Delsemine, Awadcharidine, Licaconitine, and Eldeline

the position of the esterified hydroxyl was determined in anthranoyllicoctonine as well as its derivatives(methyllicaconitine, delsemine, ajacine, awadcharidine, and licaconitine). Thus in all the above alkaloids the primary hydroxyl group of licoctonine is esterified by anthranilic acid. These alkaloids differ amongst each other by the nature of the radical which arylates the amino group of anthranilic acid. The alkaloid ajacine corresponds, as is known, to the compound (VI) (Ref 11). The structural investigation of methyllicaconitine corresponds to the one made by R. C. Cookson and co-workers. It is thus represented by formula (VII). The alkaloid delsemine (Refs 8,12) corresponds to formula (IX). The alkaloid awadcharidine corresponds to structure (X), since (according to studies by S. Yu. Yunusov and N. K. Abubakirov (Ref 8)) it differs from delsemine by the fact only that it is a derivative of succinic acid while delsemine is a derivative of methylsuccinic acid. For licaconitine formula (XII) was found. The alkaloid eldeline is an acetic ester of the amino alcohol

Investigation of the Aconite Alkaloids. XV. On the Structures of Elatine, Methyl Licaconitine, Ajacine, Delsemine, Awadchari-dine, Licaconitine, and Eldeline SOV/79-29-8-75/81

eldelidine; it is identical with deltaline. In eldeline the grouping



was found.

There are 16 references, 8 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevtiches-kiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemopharmaceutic Research Institute imeni S. Ordzhonikidze)

SUBMITTED: July 5, 1958

Card 3/3

KUZOVKOV, A.D.

Aconitic alkaloids. Part 17: Structure of the alkaloid zongorine. Zhur.ob.khim. 30 no.5:1727-1732 My '60. (MIRA 13:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
(Alkaloids)

KUZOVKOV, A.D.; PYATONOVA, T.F.

Aconitic alkaloids. Part. 18: Structure of isothalatisdine, talatisidine, condelfine, and monoacetylsongorine. Zhur. ob. khim. 31 no.4:1389-1399 Ap '61. (MIRA 14:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(Alkaloids)

KUZOVKOV, A. D.; PLATONOVA, T. F.

" The structure of the alkaloids eldeline (deltaline) and delpheline. "

report submitted for the IUPAC 2nd International Symposium on the Chemistry of Natural Products, Prague, Czech., 27 Aug - 2 Sep 62

KUZOVKOV, A.D.; PLATONOVA, T.F.

Aconitic alkaloids. Part 19: Structure of eldeline and delpheline. Zhur.ob.khim. 32 no.4:1290-1293 Ap '62. (MIRA 15:4)

1. Vsesoyuznyy institut lekarstvennykh i aromaticheskikh rasteniy. (Eledeline) (Delpheline)

PLATONOVA, T.F.; MASSAGETOV, P.S.; KUZOVKOV, A.D.

Lallemantin a new alkaloid from the plant Lallemantia peltata (L.) Fisch. et Mey. Med. prom. 16 no.2:14 F '62. (MIRA 15:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(LALLEMANTIA)
(ALKALOIDS)

FROLOVA, V. I.; KUZOVKOV, A. D.

Alkaloids from Choisya ternata H. B. and K. Structure of "choisyine". Zhur. ob. khim. 33 no.1:121-125 '63. (MIRA 16:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh i aromaticheskikh rasteniy.

(Alkaloids)

KUZOVKOV, A. D.

Dissertation defended for the degree of Doctor of Chemical Sciences at the Institute of Chemistry of Natural Products in 1962:

"Investigation of the Structure of Several Aconite Alkaloids."

Vest. Akad. Nauk SSSR. No. 4, Moscow, 1963, pages 119-145

YAKHONTOVA, L. D.; KUZOVKOV, A. D.

Alkaloids of the family Labiatae. Part 2: Partial structural formula of rosmarinecine. Zhur. ob. khim. 33 no.1:308-309 '63. (MIRA 16:1)

1. Vsesoyuznyy institut lekarstvennykh i aromaticheskikh rasteniy (VILAR).

(Rosmarinecine)

MURAV'YEVA, V.I.; KUZOVKOV, A.D.

Study of alkaloids from Securinega suffruticosa (Pall.) Rehd. Zhur.ob.khim. 33 no.2:693-694 F '63. (MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh i aromaticheskikh rasteniy (VILAR).
(Securinine)

SYUY ZHEN'-SHEN [Hsü Jên-shêng]; KUZOVKOV, A.D.

Alkaloids from Leontice ewersmanii BGE. Part 5: Structure of "leontidin." Zhur.ob.khim. 33 no.6:2067-2071 Je '63. (MIRA 16:7)

1. Vsesoyuznyy institut lekarstvennykh i aromaticheskikh rasteniy (VILAR). (Alkaloids) (Leontice)

PLATONOVA, T.F.; KUZOVKOV, A.D.

Alkaloids from the seeds of the plant Delphinium orientale J.Gay. (MIRA 16:7)
Med.prom.17.no.4:19-20 Ap '63.

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh i aromaticheskikh rasteniy.
(ALKALOIDS) (LARKSPUR)

VIZNER, K.; KUZOVKOV, A.D.; PLATONOVA, T.F.

Aconitine alkaloids. Part 20: Isoaldoline, its structure and transformations. Zhur. ob.khim. 34 no. 5:1666-1668 My '64. (MIRA 17:7)

1. Vsesoyuznyy institut lekarstvennykh i aromaticheskikh rasteniy (VILAR).

SYUY ZHEN'-SHEN' [Hsu Jen-shen]; KUZOVKOV, A.D.;

Leontice ewersmannii Bge. alkaloids. Part 6: Structure of leontidine. Zhur.ob.khim. 34 no. 5:1669-1672 My '64. (MIRA 17:7)

1. Vsesoyuznyy institut lekarstvennykh i aromaticheskikh rasteniy (VILAR).

FROLOVA, V.I.; KUZOVKOV, A.D.; KIBAL'CHICH, P.N.

Alkaloids form Ptelea trifiolata L. Structure of ptelein. Zhur. ob. khim. 34 no.10:3499-3505 O '64. (MIRA 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh i aromaticheskikh rasteniy.

MAMEDOV, G.M.; PLATONOVA, T.F.; KUZOVKOV, A.D.

Production of methyllycaconitine from the Ararat larkspur, growing in the Nakhichevan A.S.S.R. Dokl. AN Azerb. SSR 21 no.1:48-50 '65. (MIRA 18:5)

1. Vsesoyuznyy institut lekarstvennykh i aromaticheskikh rasteniy i Institut botaniki AN AzerSSR.

L 5304-66 EWT(1)/EWA(j)/EWT(m)/EWA(b)-2 JK/RM

ACC NR: AP5025007 SOURCE CODE: UR/0286/65/000/016/0067/0067

AUTHORS: Platonova, T. F.; Kuzovkov, A. D.; Khryashcheva, K. M.; Labzina, L. D.

ORG: none

TITLE: A method for purifying tetracycline. Class 30, No. 173888 [announced by the All-Union Scientific Research Institute of Antibiotics (Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 67

TOPIC TAGS: antibiotic, tetracycline, epitetracycline, calcium chloride

ABSTRACT: This Author Certificate presents a method for purifying tetracycline. To remove epitetracycline and other organic admixtures, the solution of the antibiotic is treated with a calcium salt such as calcium chloride at pH of 3.1-3.4 and the resulting compound is washed with water at pH of about 3.0.

SUB CODE: GC, LS/ SUBM DATE: 28Oct64/ ORIG REF: 000/ OTH REF: 000

UDC: 615.45.779.931

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Card 1/1

SHCHELCHKOVA, I.I.; IL'INSKAYA, T.N.; KUZOVKOV, A.D.

Alkaloids of Stephania glabra. Khim.prirod.soed. no.4: 271-275 '65. (MIRA 19:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh i aromaticheskikh rasteniy. Submitted March 26, 1965.

YELIZAROVA, R.N.; KUZOVKOV, A.D.; KIBAL'CHICH, P.N.; SHRETER, A.I.

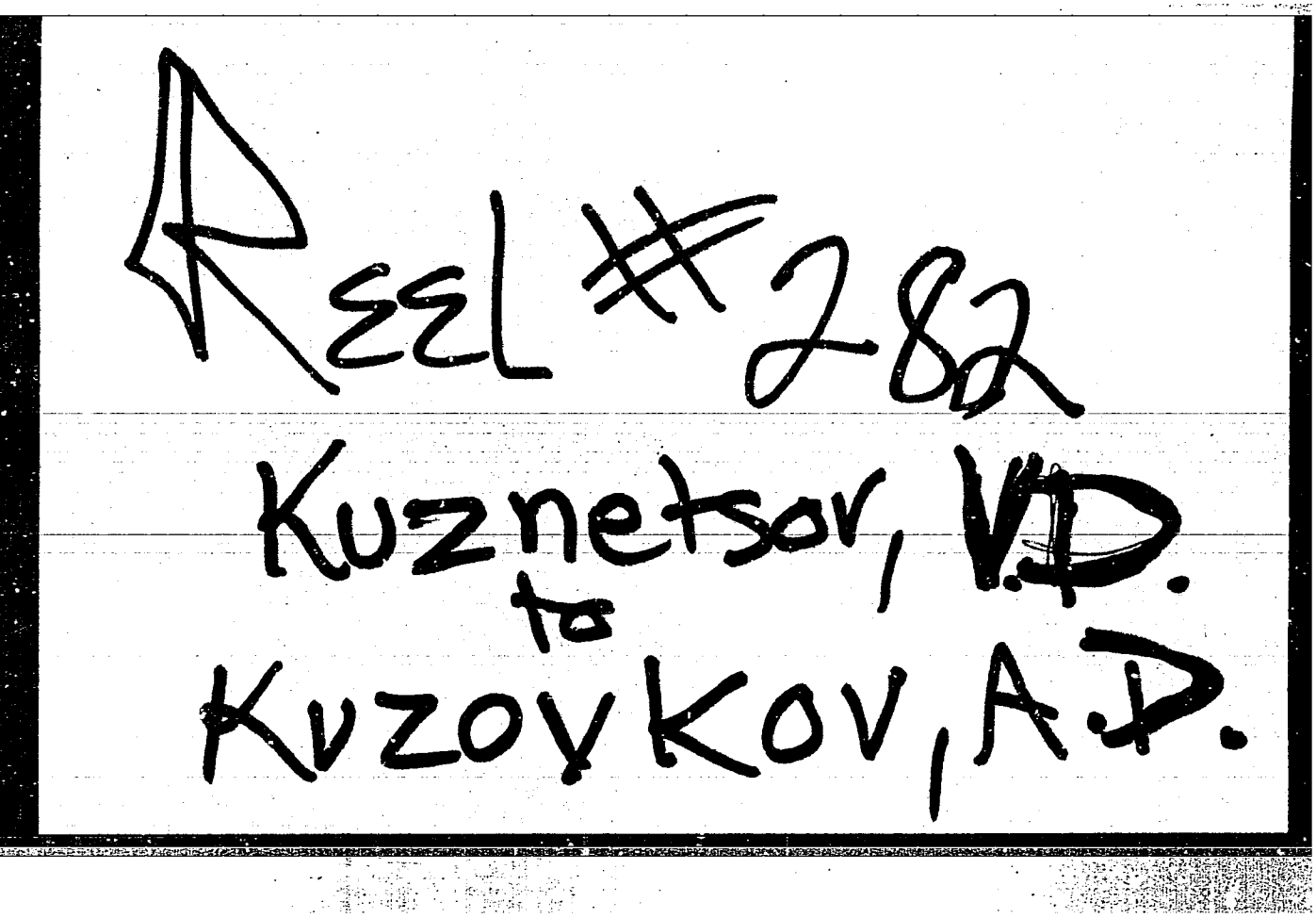
Chemical study of Plectranthus glaucocalyx Maxim. Khim. prirod. soed. no.6:427-428 '65. (MIRA 19:1)

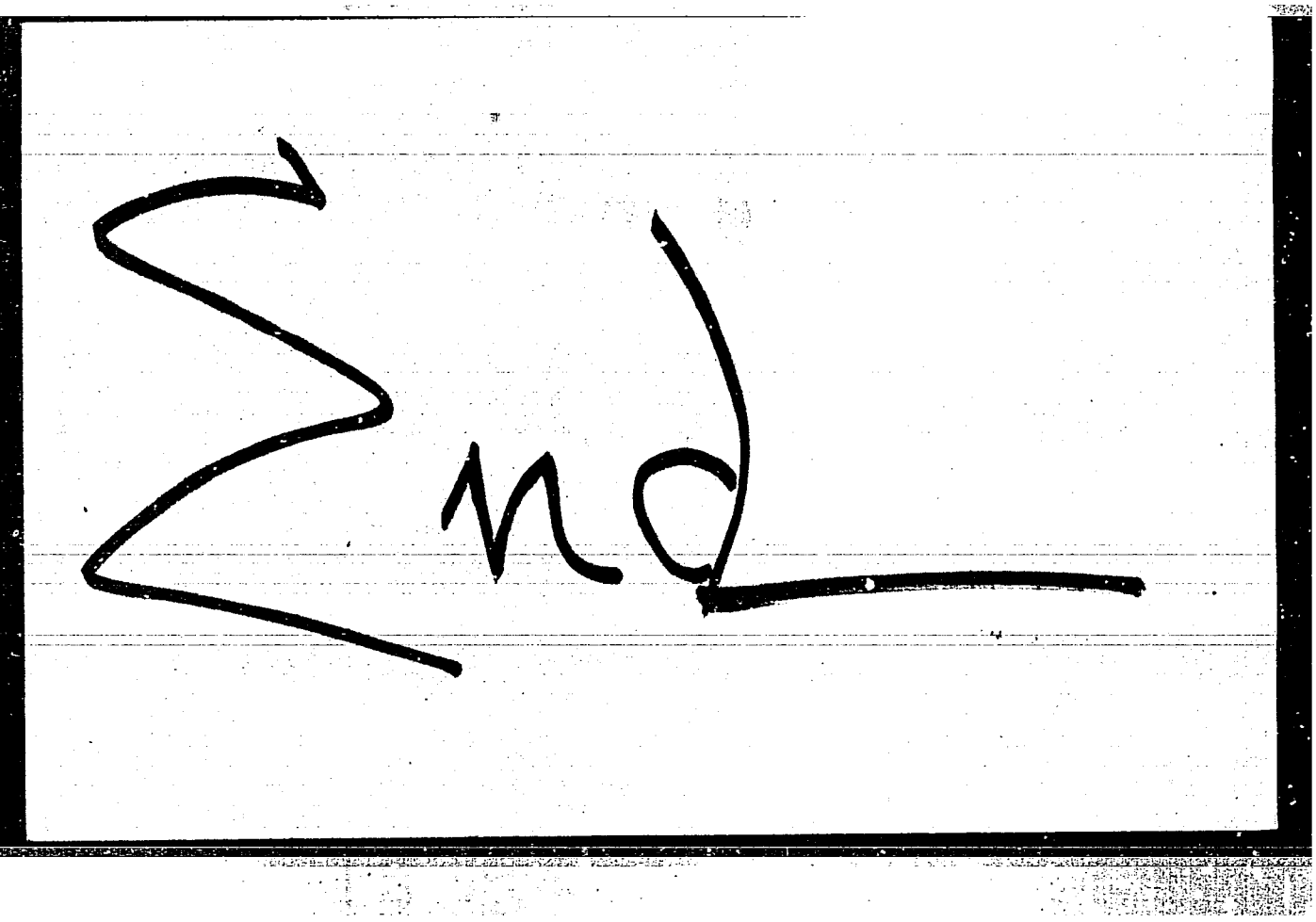
1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh i aromaticheskikh rasteniy. Submitted March 18, 1965.

RABINOVICH, I.M.; KIBAL'CHICH, P.N.; [illegible]A, I.I.; IL'INSKAYA, T.N.; [illegible]KINA, S.S.; KUZOVKOV, A.D.; BEREZHINSKAYA, V.V.; TRUTNEVA, [illegible]

Plants of the Stephania genus as a source of new medicinal preparations. Apt. delo 14 no.6:19-22 N-D '65. (MIRA 18:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh i aromaticheskikh rasteniy, Moskva. Submitted June 15, 1965.





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