"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVRIC, B.; SADEN-KREHULA, M.

Preparation of some derivatives of p-hydroxybenzenesulphonamides. Pt. 3. Croat chem acta 35 no.3:161-165 '63.

1. Institute of Organic Chemistry, Faculty of Pharmacy, University of Zagreb, Zagreb, Croatia, Yugoslavia.

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STAVRIC, S.; DRAKULIC, M.; MILETIC, B.

Incorporating adenine-C^{14} into the nucleinic acids E. coli B. after X-ray irradiation. Bul sc Youg 7 no.1/2:13 F-Ap '62.

1. Institut "R. Boskovic," Zagreb.

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SMIT, S.; STAVRIC, S.; MILETIC, B.; DRAKULIC, M.; ZAJEC, Lj.

Correlation between the photorestorableness of the lethal effect and the biochemical effects of UV irradiation. Bul sc Youg 7 no.1/2:14 F-Ap '62.

1. Institut "R. Boskovic," Zagreb.

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SMIT, Slavica; MILETIC, Branimir; DRAKULIC, Marija; STAVRIC, Stanislava; BRDAR, Branko

Photorestoration of the biosynthesis of nucleic acids in irradiated bacteria. Biol glas 15 no. 4: 207-214 '62.

1. Institut" Ruder Boskovic", Radiobioloski odjel, Zagreb.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVRIC, Stanislava; DRAKULIC, Marija; MILETIC, Branimir

Incorporation of adenine-14C into nucleic acids of bacteria irradiated with ultraviolet rays. Biol glas 15 no. 4: 215-223 '62.

1. Institut "Ruder Boskovic", Radiobioloski odjel, Zagreb.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

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STAVRIC, S.

Incorporation of the marked precursors into the nucleic acids of irradiated bacteria. Bul sc Youg 8 no.3/4:88 Je-Ag'63.

1. Radiobioloski odjel Instituta "R.Boskovic", Zagreb.

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SMIT, S.; MILETIC, B.; GIGOV, A.; BOGDANOVIC, M.; DANON, J.; JANKOVIC, M.M.; CUPINA, T.; MILOSEVIC, R.; JANKOVIC, M-a; BOGOJEVIC, R.; STAVRIC, S.; DRAKULIC, M.; MATONICHIN, I.; PAVLETIC, Z.

Review of periodicals; biology. Bul sc Youg 9 no.4/5:138-139 Ag-O '64.

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MEHEDINTI, Dumitru; STAVRICA, Mihai; TEODOR, Stefan; FLEXER, George

Control system for the driving program of tool movements in machine tools. Probleme automatiz 4:119-133 '63.

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STAVRINGINA, L.P.

Bac., Polymyxa as provoker of soft rot.

Mikrobiologiya. Vol. 21, pp 52, 1952.

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[illegible], [illegible]

"Brittle Fracture in the Plane Stressed State." Cand Tech Sci, Leningrad Physico-technical Inst, Acad Sci USSR, Leningrad, 1953. Dissertation (Referativnyy Zhurnal--Mekhanika, Moscow, Feb 54)

Sa: SUM 126, 19 Aug 1954

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

FD-1590

USSR/Engineering - Metallurgy

Card 1/1 : Pub. 41-11/18

Author : Davidenkov, N. N. and Stavrogin, A. N., Leningrad

Title : On a criterion of strength in brittle breakdown and plane stressed state

Periodical : Izv. AN SSSR. Otd. tekh. nauk 8, 100-109, Aug 1954

Abstract : Examines and compares for reliability several criteria of strength in the brittle breakdown of materials in a plane stressed state, the materials investigated being glass and gypsum in the form of thin-walled tubes. The following hypotheses on brittle breakdown were investigated: hypothesis of maximum normal tensile stress, hypothesis of maximum elongation, and hypothesis of maximum tangential stress. Diagram; graphs; table. Seven references; five of them USSR (three since 1940).

Institution : Leningrad Physicotechnical Institute of the Academy of Sciences of the USSR

Submitted : September 20, 1954

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROGIN, A.N.

USSR/Engineering - Safety factors

Card 1/1 Pub. 22 - 20/47

Authors : Davidenko, N. N., active member of the Acad. of Scs. of the Ukr-SSR; Stavrogin, A. N.; and Petrova, N. A.

Title : Safety factors in destruction of brittle substances

Periodical : Dok. AN SSSR 99/1, 73-75, Nov 1, 1954

Abstract : Experiments with brittle substances (glass, gypsum, and brittle steels), conducted for the purpose of establishing safety factors (criteria of strength), are described. The experiments were conducted with respect to both tensile and compression strength. Results are given. Five references (1931-1950). Graphs; tables.

Institution : Leningrad Physico-Technical Institute of the Acad. of Scs. of the USSR

Submitted : ...

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROGIN, A.N., kand.tekhn.nauk

Investigation of rocks in states of complex stress. Gor. zhur. no.3:34-39 Mr '61. (MIRA 14:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy marksheyderskiy institut, Leningrad.

(Mining geology)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROGIN, A.N., kand. tekhn. nauk

Some features of the dynamics of rock bursts. [Trudy] VNIMI no.48:66-73 '62. (MIRA 16:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy marksheyderskiy institut.

(Rock bursts)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROGIN, A.N., kand.tekhn.nauk

Some characteristics of the rupture of rocks. [Trudy] VNIMI no.49:90-105 '62. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy marksheyderskiy institut.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROGIN, N.N.

PESHKIN, Il'ya Solomonovich; MAKSIMOVA, N.A., otvestvennyy redaktor; STAVROGIN, N.N., otvestvennyy redaktor; PCHELKINA, D.F., tekhnicheskiy redaktor.

[How steel is made] Kak rozhdaetsia stal'. Moskva, Gos.izd-vo detskoi lit-ry Ministerstva prosveshcheniia RSFSR, 1955.167 p. [Microfilm]. (MLRA 9:7)

(Steel--Juvenile literature)

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KAPITONOV, Yevgeniy Vasil'yevich; STAVROPOL'TSEV, Fedor Stepanovich; MIKHEYEV, N.I., red.; DURASOVA, V.M., tekhn. red.

[Operation of submerged centrifugal electric pumps] Ekspluatatsiia pogruzhnykh tsentrobezhnykh elektronasosov. Kuibyshev, Kuibyshevskoe knizhnoeizd-vo, 1964. 53 p. (MIRA 17:1)

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STAVROPOL'TSEV, Y.F.

Device for measuring roller incline. Put' i put. khoz. 9 no.3:17 '65. (MIRA 18:6)

1. Starshiy inzh. mostoispytatel'noy stantsii, Kazan'.

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STAVROSKIY, A. Ye.

Biology - Study and Teaching

Student excursions to the country and socialistic agriculture. Est. v shkole No. 2, 1953.

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

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STAVROV, Boris Vasil'yevich; IVASHENTSEV, N.I., red.; FILIMONOV, I.M., red.; FAYNSHMIDT, F.Ya., tekhn.red.

[Work of a motor-vehicle driver under conditions of atomic, chemical, and bacteriological war] Rabota voditelia avtomobilia v usloviiakh primeneniia atomnogo, khimicheskogo i bakteriologicheskogo oruzhiia. Moskva, Izd-vo DOSAAF, 1960. 79 p. (MIRA 13:9)

(Air defenses) (Automobiles--Safety measures)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROV, Boris Vasil'yevich

The work of the motor vehicle driver under conditions where atomic, chemical and bacteriological weapons are used. New York, USJPRS, 1961.

iv, 56 p. illus., diagrs., tables (JPRS: 9651:CSO: 6175-N)

Translated from the original Russian: Rabota voditelya avtomobilya u usloviyakh primeneniya atomnogo, khimicheskogo i bakteriologicheskogo oruzhiya, Moscow, 1960.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

97-58-5-13/14

AUTHOR: Stavrov, G.N., Engineer.

TITLE: Calculation of the Resistance to Crack Formations of Prestressed Reinforced Concrete Constructions (Raschet predvaritel'no napryazhennykh zhelezobetonnykh konstruktsiy na treshchinostoykost')

PERIODICAL: Beton i Zhelezobeton, 1958, No. 5, USSR, Pp 197-199

ABSTRACT: The resistance to crack formation is calculated according to new instructions (SN 10-57). Professor A.A. Gvozdev and Candidate of Technical Science S.A. Dimitriyev put forward a formula for determining the position of the neutral axis. (see atricle by the same authors in Beton i Zhelezobeton 1957 No. 5) Figure 1 shows distribution of stresses; Table 1 values for determining the height of the compressed zone of rectangular cross sections at the time of appearance of cracks in concrete. Table 2 gives similar values for prestressed reinforcement and further formulae and practical examples are given. There are 2 Tables and 3 Figures.

1. Reinforced concrete--Mechanical properties 2. Structures--Stresses
3. Mathematics--Applications

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

KORENBERG, E.I.; STAVROV, N.N.

Effect of the amount and distribution of precipitation during the summer months on the population of Microtus oeconomus. Biul.MOIP. Otd.biol. 67 no.3:13-17 My-Je '62. (MIRA 15:11)
(Nero Lake region--Field mice)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROV, O.A.

New method for traction analysis of an electric car. Avt. prom. 31 no.6:14-17 Je '65. (MIRA 18:10)

1. Institut kompleksnykh transportnykh problem.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

L 11348-67 EWT(1)/FSS-2 DS (A)

ACC NR: AP6021541 SOURCE CODE: UR/0281/66/000/003/0143/0149

19

AUTHOR: Velikanov, D. P. (Moscow); Stavrov, O. A. (Moscow)

ORG: none

TITLE: Prospects for using battery-powered electric automobiles

29

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 3, 1966, 143-149

TOPIC TAGS: motor vehicle, vehicle component, vehicle engineering, vehicle engine, battery driven vehicle, electric motor

ABSTRACT: The electrically powered automobile currently under study in the Soviet Union is comparable to the experimental electrically-driven automobiles being built in England, France, and West Germany. The latter resembles the electrically-driven automobiles produced by the L'vov Bus Plant and used as mail carriers in Leningrad from 1952 to 1958. A table shows the advantages of the alkaline ferronickel battery over the lead-acid battery, and another table shows the advantages and disadvantages of the battery-powered automobile as compared to the gasoline-powered automobile. Orig. art. has: 4 figures and 4 tables.

SUB CODE: 13,09/ SUBM DATE: 29Oct65/ OTH REF: 004/

UDC: 629.113.65

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROV, O.D.

TAUSON, L.V.; STAVROV, O.D.

On the geochemistry of rubidium in granitoids [with summary in English]. Geokhimiia no.8:699-703 '57. (MIRA 11:2)
(Rubidium)
(Susamyr--Granitoids)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

GINZBURG, A.I.; FEL'DMAN, L.G.; STAVROV, O.D.

Trace elements in igneous rocks; results of the symposium on the geochemistry of trace elements in connection with petrogenesis. Sov. geol. 1 no.4:170-178 Ap '58. (MIRA 11:6)

1.Vsesoyuznyy institut mineral'nogo syr'ya.
(Trace elements) (Igneous rocks)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROV, O.D.

132-58-4-2/17

AUTHORS: Stavrov, O.D., Sorokina, M.I.

TITLE: Quantitative Calculation of Accessory Minerals of Granitoids in Large Sized Slides (Kolichestvennoye opredeleniye aktsessornykh mineralov granitoidov v bol'shikh shlifakh)

PERIODICAL: Razvedka i Okhrana Nedr, 1958, Nr 4, pp 8-15 (USSR)

ABSTRACT: Since petrographic and geochemical research requires an exact and full knowledge of the quantitative mineralogic composition of eruptive rocks, including also the quantityt of accessory minerals, a method to make these calculations in a cheaper and simpler way has been proposed. Until now, these calculations were made with the aid of large sized slides of minerals and with aid of a schlich analysis. The elimination of the schlich analysis and the use of large slides only has been proposed and the method of calculation is described.
There are 3 photos, 3 tables, 1 drawing and 4 Soviet references.

ASSOCIATION: GEOKNI AN SSSR (GEOKNI AS USSR)

AVAILABLE: Library of Congress
Card 1/1 1. Minerals 2. Granite-Analysis 3. Geochemistry
4. Petroleum-Sources

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

S/007/60/000/005/002/002
B002/B060

AUTHORS: Stavrov, O. D., Khitrov, V. G.

TITLE: Boron in Rocks and Pegmatites of the Eastern Sayan

PERIODICAL: Geokhimiya, 1960, No. 5, pp. 405 - 413

TEXT: A new emission-spectrographic method was worked out for the determination of small boron contents in rocks and minerals. The intensity of the boron line B I 2497.73 A is compared with the SiO bands 2498.10, 2497.73, and 2497.56 A. Figs. 1 and 2 show the microphotometric curves of the spectra, taken with an МФ-4 (MF-4) instrument. The sample was blown into a light arc with an АВР-2 (AVR-2) apparatus. Copper electrodes were used for this purpose. The precise determination conditions are listed in Table 1. A calibration curve (Fig. 3) was drawn for the determinations. Figs. 4,5, and 6 show the photometric curves of the spectrograms in the case of boron contents between 1 and 4.5 ppm. It is stated that further 0.4 to 0.8 ppm of boron can be determined by this method. The following rocks were examined: intrusive rocks of the Lower Proterozoic in the Bol'sheyerminskiy massif and granites at River Tikhaya,

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as well as post-Proterozoic intrusive rocks of the Zimovninskiy granodiorite massif (Table 2), moreover, adjacent gneisses and schists (Table 3). As compared to the rocks of the Upper Proterozoic, the intrusive rocks of the Lower Proterozoic and the adjacent archaic gneisses exhibit a strongly reduced boron content; this property can be made use of to distinguish among archaic complexes. The boron contents of the various constituents were determined in a medium-grained biotite-granodiorite from the Zimovninskiy granodiorite massif (Table 4). 96% of boron is bound to feldspars. Also quartz, however, contains boron in small quantities. This is shown in the compilation of Table 6: quartzes from tourmaline-containing pegmatites contain up to 0.4 ppm of B. An investigation of boron-containing pegmatites and their secondary rocks revealed (Table 5) that boron largely passes into the adjacent rocks. It is pointed out that the mother rocks of tourmaline-containing pegmatites have a higher boron content. Papers by A. P. Vinogradov and V. L. Barsukov are mentioned. There are 6 figures, 6 tables, and 10 references: 9 Soviet and 1 British.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

S/007/61/000/002/004/004
B107/B202

AUTHORS: Ginzburg, A. I., Stavrov, O. D.

TITLE: Content of rare elements in cordierites

PERIODICAL: Geokhimiya, no. 2, 1961, 183-185

TEXT: Until recently only little attention has been paid to the composition of cordierites, above all, to their content of rare elements, although cordierite is an especially interesting mineral from this point of view. Hollow channels were observed in its ring structure which is analogous to that of beryllium. Like in beryllium and milarite, the occurrence of large ions, such as calcium and sodium, potassium, rubidium, and cesium ions which are isomorphous to it, is expected in these channels. Furthermore, the authors point to the fact that the composition of cordierite is interesting also from another point of view. As was observed in recent years (A. I. Ginzburg, G. G. Rodionov, Ref. 1), rare-metal pegmatites are formed only at certain depths, and therefore they are found in most cases within metamorphic sediments at this depth. Andalusite and cordierite are typical minerals

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of these rocks. For this reason, cordierite is frequently found in rocks surrounding rare-metal pegmatites, and occurs in exocontacts of pegmatite dikes and in pegmatite dikes as a typical "xenolithic" mineral. Usually, lithium is transported from lithium pegmatite into the surrounding rocks where it is fixed in magnesium-containing minerals - biotite and amphibole - which, in turn, are transformed into protolithionite or lithionite, and into holmquistite. In this connection, the problem arises whether lithium participates in the formation of cordierite, and whether lithium cordierite occurs in nature. To answer these questions, O. D. Stravrov analyzed cordierite samples from various regions of the world for rare alkalies. He obtained the following results:

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B107/B202

Content of rare ...

Tables 1 and 2

Origin of sample	region	Li_2O	Rb_2O	Cs_2O	BeO
from metamorphic sediments without occurrence of lithium pegmatites	Switzerland	0.11	not found		0.004
from metamorphic sediments in regions with alkali massives	Norway	0.02	n.f.	n.f.	0.004
from metamorphic sediments in regions with occurrence of pegmatites	Bavaria	0.02	n.f.	n.f.	0.04
	Madagaskar	0.043	n.f.	n.f.	0.005
without lithium minerals	Northern Pribaykal'ye	0.043	n.f.	n.f.	n.f.
From endo contact zones of pegmatites without lithium minerals	Ural, Murzinka	0.19	0.005	0.023	0.16
from endo contact zones of beryllium-muscovite pegmatites containing triphyline	Turkestan-skiy Range	0.43	n.f.	n.f.	0.0052

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Tables 1 and 2

Origin of sample	region	Li_2O	Rb_2O	Cs_2O	BeO
from metamorphic sediments at certain distances from spodumene pegmatites	Eastern Siberia	0.24	n.f.	n.f.	0.004
from metamorphic sediments near spodumene pegmatites	Eastern Siberia	0.64	0.05	0.2	

Pure cordierites were analyzed, some of which had been collected by the authors, while others had been made available by L. G. Fel'dman and I. N. Timofeyev from the collections of the Mineralogicheskiy muzey AN SSSR im. akad. A. Ye. Fersman (Mineralogical Museum AS USSR imeni Academician A. Ye. Fersman). Lithium analyses were made by flame photometry. Rubidium and cesium were analyzed directly by spectrum analysis (A. K. Rusanov, V. G. Khitrov, N. T. Batova, Ref. 3). The following conclusions can be drawn from the data mentioned: (1) The maximum amount of lithium is contained in cordierites from areas with lithium pegmatites. A lower amount is contained in cordierites from beryllium pegmatites which contain only small amounts of lithium. (2) Cordierite also contains Cs, in some cases even up to tenth %.

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Apparently, Cs occupies the same place in cordierite as in beryllium. Like in beryllium, the amount of Cs is much larger than that of Rb. Since cordierite is a magnesium mineral, lithium contained therein apparently replaces magnesium, much like in mica, tourmaline and amphibole. This replacement may take place in two ways: (A. I. Ginzburg, Ref. 4). (a) Two magnesium ions can be replaced by lithium and aluminum: $2\,Mg^{2+} \leftarrow Li^{+} + Al^{3+}$. With the cordierite composition $(Mg, Fe)_2Al_3[Si_5AlO_{18}]$, the lithium analog of cordierite will have the following composition in the case of the mentioned replacement: $LiAl_4\,Si_5AlO_{18}$; (b) the magnesium ion can be replaced by lithium; valency is compensated such that aluminum is replaced by silicon having a coordination number of four, i. e., $Mg^{2+}_{(VI)} + Al^{3+}_{(IV)} \leftarrow Li^{+}_{(VI)} + Si^{4+}_{(IV)}$. In this case lithium cordierite will have the following composition: $(Mg, Fe)LiAl_3[Si_6O_{18}]$ or $(Mg, Fe)LiAlAl_2[Si_6O_{18}]$ which is close to the beryllium composition: $Be_3Al_2[Si_6O_{18}]$. The lithium-containing cordierite of the composition $(Mg, Fe)LiAlAl_2[Si_6O_{18}]$ differs from beryllium in that it contains

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one magnesium, lithium, and aluminum ion instead of the three beryllium ions. In this connection it should be added that N. V. Belov (Ref. 5) regards the replacement of beryllim by lithium as possible since he assumes that lithium may have a coordination number of six four. Also the replacement of beryllium by aluminum is regarded as possible. R. E. Folinsbee (Ref. 6) assumes that the replacement of beryllium by magnesium is possible without essential structural changes. Since beryllium and cordierite have the same structure it can be assumed that beryllium may enter the cordierite structure (A. I. Ginzburg, Ref. 7). For this reason R. D. Pavlova made quantitative analyses of beryllium oxide in various cordierites in the spectral laboratory of the authors' institute. As may be seen therefrom no large amounts of BeO are found in the cordierites. The largest amounts - between 0.15 and 0.20 % - are found in cordierites from some pegmatite deposits. Cordierites from metamorphic sediments contain almost no beryllium oxide. The following conclusions can be drawn: (1) owing to their ring structure cordierites may contain - similar to beryllium - considerable amounts of alkali, Na, Li, Cs. (2) Cordierites may be enriched with Cs. (3) Cordierite may serve as characteristic mineral indicator of the occurrence of lithium pegmatites. (4) Natural occurrence of a Li cordierite of the composition $LiMgAl_3[Si_6O_{18}]$

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is possible. [Abstracter's note: Complete translation]. There are 2 tables and 7 references: 6 Soviet-bloc.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya, Moskva (All-Union Scientific Research Institute of Mineral Raw Materials, Moscow).

SUBMITTED: March 18, 1960

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROV, O.D.; BYKOVA, T.A.

Distribution characteristics of a series of rare and volatile elements in rocks and pegmatites of the Korosten' pluton. Geokhimiia no.4:328-331 '61. (MIRA 14:5)

1. All-Union Scientific Research Institute of Mineral Raw Materials, Moscow.

(Korosten' region--Rocks)
(Lithium)
(Rubidium)
(Fluorine)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROV, O.D.

Rare element content of quartz. Geokhimiia no.6:508-514 '61. (MIRA 14:6)

1. All-Union Institute of Mineral Raw Material, Moscow.
(Quartz) (Lithium) (Boron)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROV, O.D.; ZNAMENSKIY, Ye.B.

Distribution of rare alkalies and mineralizer elements (B, F) in granitoids of the Kalba Massif (eastern Kazakhstan). Geokhimiia no.12:1108-1114 '61. (MIRA 15:3)

1. All-Union Scientific Research Institute of Mineral Raw Materials and Institute of Geochemistry, Siberian Branch of the Academy of Sciences of U.S.S.R., Irkutsk.
(Kalba Range—Geochemistry)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROV, O.D.; KHITROV, V.G.

Possible geochemical relationship between cesium and boron [with summary in English]. Geokhimiia no.1:53-61 '62. (MIRA 15:2)

1. All-Union Institute of Mineral Raw Mateials, Moscow.
(Cesium)(Boron)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROV, O.D.

Role of rare elements in the solution of a series of geological problems. Min.syr'e no.4:61-68 '62. (MIRA 16:4)
(Metals, Rare and minor) (Rocks, Igneous)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROV, O.D.; GINZBURG, A.I., glavnyy red.; POLYAKOV, M.V., zam. glavnogo red.; APEL'TSIN, F.R., red.; GRIGOR'YEV, V.M., red.; RODIONOV, G.G., red.; STEPANOV, I.S., red.; TROKHACHEV, P.A., red.; FAGUTOV, V.P., red.; KHRUSHCHOV, N.A., red.; CHERNOSVITOV, Yu.L., red.; SHMANENKOV, I.V., red.; SHCHERBINA, V.V., red.; EYGELES, M.A., red.; FEDOTOVA, A.I., red.izd-va; IYERUSALIMSKAYA, Ye., tekhn. red.

[Basic characteristics of lithium, rubidium, sesium in the process of the formation granite intrusives and the pegmatites connected with them.] Osnovnye cherty geokhimii litiia, rubidiia, tseziia v protsesse stanovleniia granitnykh intruzivov i sviazannykh s nimi pegmatitov. Moskva, Gosgeoltekhizdat, 1963. 140 p. (Geologiia mestorozhdenii redkikh elementov, no.21). (MIRA 17:2)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROV, O.D.; PORTNOV, A.M.

Geochemistry of cesium in alkali rocks. Geokhimiia no.3:337-342 Mr '65. (MIRA 18:7)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

PONIZOVSKIY, A.M., kand. khim. nauk, otv. red.; ARAV, R.I., red.; KUSENKO, Yu.M., red.; STAVROV, S.N., kand. khim. nauk, red.

[Problems in the overall processing of sea brine and the production of saline building materials] Voprosy kompleksnoi pererabotki rassolov morskogo tipa i polucheniia rapnykh stroitel'nykh materialov. Simferopol, Krymizdat, 1963. 151 p. (MIRA 17:12)

1. Akademiya budivnytstva i arkhitektury URSR. Instytut budivel'nykh materialiv i vyrobiv. Krymskyi filial.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROV, S.N., kand. khim. nauk; YEYDINOVA, Ye.M. [Eidinova, E.M.]

Preparation of magnesium chloride from magnesium gypsum. Khim. prom. [Ukr.] no.3:76-78 Jl-S '63. (MIRA 17:8)

1. Krymskiy filial Nauchno-issledovatel'skogo instituta stroitel'nykh materialov Akademii stroitel'stva i arkhitektury UkrSSR.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

PONIZOVSKIY, Abram Mikhaylovich, kand. khim. nauk; STAVROV, Stepan Nikolayevich, kand. khim. nauk; SEBKO, G., red.

[Miraculous treasure house of chemistry] Chudesnaia kladovaia khimii. Simferopol', Krym, 1964. 44 p. (MIRA 18:1)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROV, S.N.; MOROZOV, A.A.

Effect of the nature of cations on the properties of the anionic polyelectrolyte agaroid. Ukr. khim. zhur. 23 no.6:721-727 '57. (MIRA 11:1)

1.Odesskiy gosudarstvennyy universitet im. I.I. Mechnikova i Chernovitskiy gosudarstvennyy universitet.
(Ion exchange) (Electrolytes)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROV, S.N., Cand Chem Sci-- (diss) "Study in the field of the physical chemistry of the Black Sea agaroid and White Sea agar-agar." Odessa, 1953. 16 pp (Min of Higher Education UkSSR. Odessa State U im I.I.Mechnikov), 150 copies (KL,44-53,120)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

PONIZOVSKIY, A.M.; SHARGORODSKIY, S.D.; STAVROV, S.N.; VLADIMIROVA, N.M.

Thenardite in the Marfovka Lake, Crimea. Izv. Krym. otd. Geog. ob-va no.5:275-276 '58. (MIRA 14:9)
(Marfovka Lake--Thenardite)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

PONIZOVSKIY, A.M. [Ponyzovs'kyi, A.M.]; SHARGORODSKIY, S.D. [Shargorods'kyi, S.D.]
STAVROV, S.N. [Stavrov, S.M.]; VLADIMIROVA, N.M. [Vladymyrova, N.M.]

Thenardite and mirabilite in Lake Marfovka. Dop. AN URSR no.6:651-653 '58. (MIRA 11:9)

1. Institut mineral'nykh resursov AN USSR. Predstavil akademik AN USSR Yu.K. Delimarskiy [IU.K. Delimars'kyi]
(Marfovka, Lake (Kerch Peninsula--Thenardite)
(Marfovka, Lake (Kerch Peninsula--Mirabilite)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

AUTHORS: Morozov, A.A., Stavrov, S.N. 69-58-2-11/23

TITLE: The Effect of Cations on the Properties of Black Sea Agaroid (Vliyaniye kationov na svoystva chërnomorskogo agaroida)

PERIODICAL: Kolloidnyy zhurnal, 1958, Vol XX, Nr 2, pp 194-198 (USSR)

ABSTRACT: The use of agar-agar, agaroid, and other extracts of red sea plants is based on their ability to form durable gels. Agaroid is prepared from the Black Sea plant Phyllophora nervosa and is a natural cation exchanger. Its technological properties may be changed by the replacement of the cation contained in it. The change of the equivalent electric conductivity is characteristic for weakly dissociated low-molecular compounds. According to the degree of dissociation, the following order can be established: Li Na K initial product Ca Ba. The higher the degree of dissociation (figure 4) the higher the viscosity of the solution in water (figure 1), and the swelling in water (figure 3) the lower the gel formation ability (figure 2). The interaction of the molecules in the solution is increased by the transition from Li-agaroid to Ba-agaroid, which leads to their coagulation in diluted solutions and to structure formations in concentrated solutions. The classification of floridea extracts according to swelling is not practical. The dif-

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69-58-2 -11/23

The Effect of Cations on the Properties of Black Sea Agaroid

ference in the extract properties is caused by the charge on the high-molecular anion. The most important characteristic is therefore the number of sulfate groups per weight unit of the substance.
There are 4 graphs and 21 references, 14 of which are Soviet, 6 English and 1 French.

ASSOCIATION: Odesskiy gosudarstvennyy universitet imeni I.I. Mechnikova (Odessa State University imeni I.I. Mechnikov)
Chernovitskiy gosudarstvennyy universitet (Chernovtsy State University)

SUBMITTED: January 3, 1957

1. Oceanography 2. Chemistry 3. Gels--Formation 4. Plants --Applications

Card 2/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

[illegible], A. A. and [illegible], S. M.

"The Results of the Investigations of Cation-Substituted Specimens of Black Sea Agaroid and White Sea Agar-Agar."

report presented at the Section on Colloid Chemistry, VIII Mendeleyev Conference of General and Applied Chemistry, Moscow, 16-23 March 1959.
(Koll. Zhur. v. 21, No. 4, pp. 509-511)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

MOROZOV, A.A.; STAVROV, S.N.

Study of cation-substituted samples of agar-agar. Koll. zhur. 22 no.4:429-433 Jl-Ag '60. (MIRA 13:9)

1. Odesskiy universitet im. I.I. Mechnikova i Chernovitskiy universitet. (Agar)

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L 37220-66 EWP(j)/EWT(m)/T IJP(c) RM/WW

ACC NR: AP6019193 SOURCE CODE: UR/0122/66/000/002/0046/0048

35
34
B

AUTHOR: Stavrov, V. P. (Engineer); Dedyukhin, V. G. (Engineer)

ORG: None

TITLE: Taking advantage of the structural anisotropy of fiberglass-reinforced plastics in stamping power components

SOURCE: Vestnik mashinostroyeniya, no. 2, 1966, 46-48

TOPIC TAGS: anisotropic medium, fiber glass, plastic/ AG-4S plastic

ABSTRACT: The authors consider the effect which the anisotropic deformational and strength properties of fiberglass-reinforced plastics have on the strength and rigidity of components made from these materials, and also study effective methods for controlling the anisotropy of this type of plastic during the stamping process. The effect of mold design on filler orientation is discussed. Fiber orientation may be selected to suit the conditions under which the component is designed to operate. It is shown that the structural anisotropy of fiberglass-reinforced plastic may be used to advantage in making components from this material when the system of external forces acting on the component is known. The nature of the initial material must be taken into consideration together with the method used for preparation of this material and the stamping conditions in order to select optimum fiber orientation. An example is given

Card 1/2 UDC: 678.5.06:677.521

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L 37220-66

ACC NR: AP6019193

showing the use of anisotropy for increasing the strength and rigidity of a cover made from AG-4S glass-reinforced plastic. The theoretical calculations show satisfactory agreement with experimental data. Orig. art. has: 4 figures, 1 table, 1 formula.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 008/ OTH REF: 000

Card 2/2

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROVA, D.A.

Study of vibratory sensitivity. Uch.zap.Len. un no.185:127-134 '54. (MLRA 8:10)

(Vibration) (Senses and sensation)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROVA, D.S.; MARGARITOVA, M.F.; MEDVEDEV, S.S.; Prinimala uchastiye GOL'SHTEYN, S.B.

Emulsion polymerization kinetics of methyl methacrylate in the presence of organic acids and amines and an anion-active emulsifier. Vysokom. soed. 7 no.4:725-728 Ap '65. (MIRA 18:6)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROVA, E. R.

Novotelnov, N. V. and Stavrova, E. R. (Leningrad Technological Institute of the Refrigerating Industry): "Antibiotic and Anti-oxidant Properties of the C + P Vitamin Complex" /English - 6 pages/

report presented at the International Inst. of Refrigeration (IIR), Annual Meetings of Commissions 3,4, and 5, Moscow, 3-6 Sep 1958.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

NOVOTEL'NOV, N.V.; STAVROVA, E.R.

Increasing stability of butter by means of vitamins P and C.
Izv.vys.ucheb.zav.pishch.tekh. no.4:64-68 '58. (MIRA 11:11)

1. Leningradskiy tekhnologicheskiy institut kholodil'noy promyshlennosti, Kafedra mirobiologii i biokhimii.
(Butter) (Ascorbic acid) (Vitamins-P)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROVA, E. R. Cand Tech Sci -- (diss) "Raising the durability of butter by means of enriching it with vitamins P and C." Len 1959. 13 pp (Min of Higher Education USSR. Main Administration of Technological Higher Educational Institutions. Len Technological Inst of Refrigeration Industry), 100 copies (KL, 49-59, 141)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

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Starred E.R.

PHASE I BOOK EXPLOITATION SOV/3747

International Congress of Refrigeration. Moscow, 1959

Sbornik dokladov ot SSSR (Collected Soviet Reports) Moscow, Gostorgizdat, 1959. 214 p. Errata slip inserted. 2,000 copies printed.

Ed. (Title page): Sh. N. Kobulashvili; Ed. (Inside book): N. V. Chichkov; Tech. Ed.: V. V. Rabicheva.

PURPOSE: This collection of articles is intended for those interested in the problems of food refrigeration.

COVERAGE: The collection contains 26 reports which were submitted at the meeting of the 3rd, 4th, and 5th Committees of the International Institute of Refrigeration. The meeting was held in Moscow, September 3-6, 1958, and was attended by 265 Soviet specialists and 115 representatives from other countries. The 73 reports discussed at this meeting cover such broad areas as the automation of the cooling of refrigerating installations, the use of finned-tube type refrigerating devices, fast-freezing food freezers, the theory and technique of rapid cooling and freezing of meat and fish, the use of antibiotics in the cold storage of food, and the operation of refrigerators and cooling systems. A complete account of the proceedings of this meeting was published by the International Institute of Refrigeration in 1959. No personalities are mentioned. References follow several of the articles.

TABLE OF CONTENTS:

Golovkin, N., N. Alyamovskiy, L. Pershina, and O. Shagan [Leningradskiy tekhnologicheskiy institut kholodil'noy promyshlennosti, Kafedra kholodil'noy tekhnologii (Leningrad Technological Institute of the Refrigeration Industry, Department of Refrigeration Technology)]. Mechanical Chemistry of Muscular Tissue in the Refrigeration of Meat and Fish 112

Dobrova, G. B., Yu. A. Ravich-Shcherbo, Ye. A. Shotryayeva, and A. Ya. Onikiyenko [Nauchno-issledovatel'skiy institut mekhanizatsii rybnoy promyshlennosti (Scientific Research Institute for Mechanization of the Fishing Industry)]. The Use of Tetrachlorocyclite for Preserving Fresh Fish 119

Novotel'nov, N. V., and E. B. Stavrova [Leningrad Technological Institute of the Refrigeration Industry]. Antibiotic and Antioxidizing Properties of the C + P Vitamin Complex 124

Noskova, G. L., and G. Yu. Fok [All-Union Scientific Research Institute of the Refrigeration Industry imeni A. I. Mikoyan]. Temperature Dependence of the Reproduction and Biochemical Activity of Psychrophyl Bacteria Within the Range of Temperatures Required for the Cold Storage of Food Products 130

Piskarev, A. I. [All-Union Scientific Research Institute of the Refrigeration Industry imeni A. I. Mikoyan]. The Effect of the Preliminary Conservation of Fish on Histological Structure and Hydrophylic Properties During Refrigeration 140

Rystov, D. G. [All-Union Scientific Research Institute of the Refrigeration Industry imeni A.I. Mikoyan]. Calculation of the Refrigeration Time for Food Products 147

Khachaturov, A. [All-Union Scientific Research Institute of the Refrigeration Industry imeni A. I. Mikoyan]. Thermal Processes in Fish Freezing in an Air Stream 153

Chizhov, G. B. [Leningrad Technological Institute of the Refrigeration Industry]. Generalization in the Criterial Relationships of Experimental Data on the Freezing of Food Products 164

COMMITTEE NO. 5

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

NOVOTEL'NOV, N.V.; GOLOVKINA, M.T.; STAVROVA, E.R.

Synergism between ascorbic acid and bioflavonoids. Nauch. dokl.vys.shkoly; biol.nauki no.1:137-141 '59. (MIRA 12:5)

1. Rekomendovana kafedroy mikrobiologii i biokhimii Leningradskogo tekhnologicheskogo instituta kholodil'noy promyshlennosti.
(ASCORBIC ACID) (FLAVONOIDS)

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROVA, N. A.

Cand Med Sci - (diss) "Materials for the study of the medicinal action of Bergenia crassifolia /badan/ in gingivo-stomatitis." Kazan', 1961. 18 pp; (Ministry of Public Health RSFSR, Kazan' State Med Inst); 260 copies; price not given; (KL, 6-61sup, 240)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROVA, Petra K.

Utilization of popular scientific literature in teaching biology. Biol i khim 5 no.1:30-33 '63.

1. I politekhnicheska gimnaziia, Pleven.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROVA, S.D.; PEREGUDOV, G.V.; MARGARITOVA, M.F.

Mechanism of interaction between benzoyl peroxide and dimethylaniline as studied by spectral methods. Dokl. AN SSSR 157 no.3: 636-638 Jl '64. (MIRA 17:7)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova. Predstavleno akademikom S.S. Medvedevym.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

[illegible], [illegible]; [illegible], M.F.; [illegible], [illegible]

Emulsion polymerization kinetics of methyl methacrylate in the presence of organic acids and amines and α cation-active emulsifier. Vysokom. soed. 7 no.4:717-724 Ap '65. (MIRA 18:6)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni Lomonosova.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

VELVART, Jozef; STAVROVSKA, Olga; HUDAKOVA, Gabriela

The role of bronchial spasms in hemp disease. Frac. lek. 16 no.9:397-400 N '64.

1. Klinika chorob z povolania Lekarskej fakulty University Komenskeho v Bratislave (prednosta prof. dr. M. Nosal) a Ustav zdravotnickej statistiky v Bratislave (prednosta prom. ekon. S. Estok).

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6"

"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

S/196/62/000/006/003/018
E194/E154

AUTHOR: Stavroviyetskaya, N.V.

TITLE: 'Eskapon' insulation

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.6, 1962, 5, abstract 6 B23. (In Symposium 'Izolyatsiya elektr. mashin (Insulation of Electrical Machines), 6. M., 1961, 194-205)

TEXT: The following 'Eskapon' insulating materials are in industrial use: (1) 'Eskapon' compound to OBH (OBN) 503.0.02, produced by heating thin threads of synthetic rubber to a temperature of 300-350 °C without access of air. It is used in the manufacture of varnishes and flexible glass-'eskapon' tape. (2) 'Eskapon' varnish 19Э (19E) to OBN 503.011, produced by dissolving synthetic rubber in kerosine using plastifiers, stabilisers and catalysts. It is used in the manufacture of fibreglass 'Eskapon' cloth. (3) 'Eskapon' varnish 17Э (17E) to OBN 644.005, used to coat glass fibre and glass-textolite products. (4) Fibreglass 'Eskapon' varnish cloth ЛСЭ-19 (LSE-19) to OBN 503.005 made by impregnating and coating the

Card 1/3

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'Eskapon' insulation

S/196/62/000/006/003/018
E194/E154

fibreglass cloth with varnish 19-3 (19-Z), after which it is baked at a temperature of 220-250 °C. This is suitable as electrical insulation for slot windings, for end windings of rotors and for stator coils. Fibreglass cloth grade LSE-19 is also used to make 'Eskapon' glass-board and glass-'Eskapon' tape. (5) 'Eskapon'-glass board grade ЭС-1 (ES-1) to OBN 503.014, made by varnishing glass-'Eskapon' cloth with a layer of bakelite and a layer of Glyptal varnish. It can replace micanite for insulating the straight parts of pre-formed rotor bars. (6) sticky glass-'Eskapon' tape grade ЛСЭК-19 (LSEK-19) to OBN 503.010, made by depositing a layer of 'Eskapon' compound on glass-'Eskapon' cloth. It is used in place of micanite, particularly: a) for continuous application of the main insulation of 3 kV stator coils which are subsequently impregnated; b) in applying the main insulation to the coils of generators СД (SD), ГС (GS), ПС (PS), and С (S) with subsequent impregnation. Investigations carried out in the VEI, VNIIEM, LPI, and KhEME, the "Elektrosila" Works, MTZ and the Barachinskiy Works, showed that glass-'Eskapon' cloth is a very promising insulating

Card 2/3

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CZECH [illegible]

VELVAR[illegible], [illegible], [illegible] [illegible], O., Clinic for Occupational Diseases ([illegible]), Faculty of Medicine (Lekarska [illegible]), [illegible] University, Bratislava, Professor M. NOSAL, [illegible], [illegible]

"Health [illegible] Workers Engaged in the Processing of Hemp"

Prague, [illegible], Vol XV, No 4, May 63, pp 153-157.

Abstract [Authors' English summary, modified]: Fifty-five woman workers in a hemp-processing factory were examined. Thirty-four [illegible] from a hemp-workers' disease which differs from [illegible]. Its intensity depends on the amount of dust. [illegible] of exposure patients have attacks of dry [illegible], [illegible], headache, and fatigue. Fourteen workers [illegible] the symptoms at work only, 20 also at home. It is [illegible] disease is caused by the inhalation of a [illegible]. Seventeen references, including 2 Czech.

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PRIGOZHINA, E.L.; STAVROVSKAYA, A.A.

In vitro cultivation of the mouse myeloid chloroleukaemia virus. Acta virol. (Praha) [Eng.] 8 no.3:277-282 My'64

1. Institute of Experimental and Clinical Oncology, U.S.S.R. Academy of Medical Sciences, Moscow.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

OSTROVSKAYA, L.S.; STAVROVSKAYA, O.A.

Surgical interventions in contused injuries of the liver and spleen.
Voen-med. zhur. no.1:29-33 Ja '56 (MLRA 10:5)
(SPLEEN, wounds and injuries,
surg. of closed inj.) (Rus)
(LIVER, wounds and injuries,
same)

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CA

25

Dyeing with ice colors. V. A. Izmail'skii and V. I. Stavrovskaya. Russ. 51,018, Oct. 31, 1937. Fabric is treated with a soln. of β-naphthol or Naphthol AS and then with a soln. of diazo compd. obtained from 1-amino-2,5-dimethyl-4-benzoylaminobenzene.

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

Singular crystallization forms of certain derivatives of 1-amino-3-methyl-4-benzylamino-5-methoxybenzene. V. A. Izmail'skii and V. I. Stavrovskaya. *J. Gen. Chem.* (U. S. S. R.) 7, 80-3(1937).—Certain derivs. of 2,4,5-Me(BzNH)(MeO)$C_6H_2NH_2$ (I) (cf. Kizhner and Kramova, *C. A.* 27, 5319) tend to form crystals of singular structures. The condensation products and azo derivs. give long, hair-like needles or crystals of curved formation of crescent- and spiral-like patterns. The p-$O_2NC_6H_4COCl$ deriv., m. 200°, crystd. from C_5H_5N in light yellow long needles interlaced into a felt-like mass. The condensation product of p-$O_2NC_6H_4CHO$ with I recrystd. from alc. gave red-orange, crescent-shaped plates, m. 193°. The azo deriv., m. 231-2° (decompn.), obtained from diazotized I and β-naphthol, crystd. from C_6H_6 in a compact mass consisting of straight and curved long needles. The product of condensation of diazotized I and $PhNMe_2$ in alc. gave orange spirals of long filaments, m. 172-2.5°. The effect of the structure and the medium on the crystn. of the compds. of this type is being investigated.

Chas. Blanc

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

Cu

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Derivatives of benzothiazole. II. Obtaining 2-chlorobenzothiazole and some of its derivatives. N. S. Drozdov and V. I. Stavrovskaya. *J. Gen. Chem.* (U. S. S. R.) 7, 2813-18 (in French 2818) (1937); cf. *C. A.* 32, 160[illegible]. Nitration of 2-mercaptobenzothiazole (I) gives 70% of 6-nitro-2-mercaptobenzothiazole, m. 226°. Reduction of this with H_2S gives 75% of the corresponding amine, m. 260-1°, and this, by diazotization and treatment with Cu_2Cl_2 and HCl gives 6-chloro-2-mercaptobenzothiazole (II), m. 244-5°. In an analogous way the 6-I deriv., m. 233-4°, is obtained. By diazotization of 2-aminobenzothiazole, 25% of 2-chlorobenzothiazole (III) is obtained, but if I is heated with PCl_5 in $POCl_3$ or $PSCl_3$ at 100° until no more HCl is evolved, 55% of III, b. 248°, is obtained. [illegible] temp. is raised, more IV and less III are formed. Nitration of III gives a [illegible] zolyl) 2,2'-monosulfides, m. 142° and 281-2°, resp. Higher nitration temp. favors formation of the dinitro compd. Nitration of III gives 83% of 6-nitro-2-chlorobenzothiazole, m. 192°. The same compd. is obtained from 6-nitrobenzothiazolyl 2,2'-monosulfide and PCl_5, but only in 5% yield. A poor yield of product is also obtained when II is treated with PCl_5. Thus, side reactions occur to a very great extent when PCl_5 reacts with derivs. of 2-mercaptobenzothiazole. *H. M. Leicester*

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PROCESSES AND PROPERTIES INDEX

Bacteriophage in dysentery patients. V. I. Stavrovskaya. *Z. Microbiol. Epidemiol. Immunitätsforsch.* (U. S. S. R.) 19, 59-66(in English 65-6)(1937).—Bacteriophage (I) was isolated in 66.6% of 63 dysentery patients exami. The titer was 10^{-6} to 10^{-9}. An attempt was made to det. whether the presence or absence of I influences the course of the disease and the isolation of specific bacteria. I strains (40) were tested against the corresponding strains of Shiga bacilli. When the bacilli were found resistant to the lytic action of the corresponding I they were also resistant to the action of all other strains of I. In 12 cases the I showed lytic action only toward the corresponding strains of dysentery bacilli. The form, course and result of the disease appear to be independent of I

S. A. Karjala

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PROCESSES AND PROPERTIES INDEX

11 H

Sulfonamide derivatives in malaria therapy. Nauka Stavrovskaya. *Med. Parasitol. Parasitic Diseases* (U. S. S. R.) 8, No. 3, 323-30(1939).—A review giving the constitution and history of application of sulfonamide drugs in malaria. 22 references. C. S. Shapiro

METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

Benzothiazole compounds III. Some derivatives of 2-aminobenzothiazole. N. S. Drozdov and V. I. Stavrovskaya. *J. Gen. Chem.* (U. S. S. R.) 9, 109 [illegible]; cf. C. A. 32, 2940[illegible].—Reduction of 2-chloro-6-nitrobenzothiazole with AcOH and Fe gives the corresponding amine (I), m. 164°. If Zn and HCl are used, yellow crystals, m. above 300°, are formed. By the diazo reaction with I are prepd. 2,6-dichlorobenzothiazole, m. 101°, and 2-chloro-6-iodobenzothiazole, m. 137°. In all these compds. the Cl in the 2-position is easily replaced in reactions with amines. By this reaction the following *benzothiazoles* are prepd.: 2-phenylamino, m. 159°, 2-phenylamino-6-nitro, m. 247°, 2-(2'-*methylphenyl*)*amino*, m. 204.5°, 2-(4'-*dimethylaminophenyl*)*amino-6-nitro*, red orange, m. 234°, 4-di-(6'-*nitrobenzothiazole-2'-aminophenyl*)*arsenic acid*, m. 63°, 2-(γ-*piperylideno-β-hydroxypropyl*)*amino*, reddish yellow oil, 2-(δ-*diethylamino-α-methylbutyl*)*amino*, yellow oil, 2-(δ-*diethylamino-α-methylbutyl*)*amino-6-nitro*, thick orange oil, 2-(δ-*diethylamino-α-methylbutyl*)*amino-6-chloro*, thick yellow oil, 2-(δ-*diethylamino-α-methylbutyl*)*amino-6-iodo*, thick yellow oil. In spite of their resemblance to similar quinoline and acridine compds., none of these substances is an antimalarial. H. M. L.

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PROCESSES AND PROPERTIES INDEX

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Separated auxo enoid systems. VI. The color of nitrobenzyl derivatives of aromatic amines. A. A. Izmail'skii and V. I. Stavrovskaya. *J. Gen. Chem. A. S. S. R.*, 9, 647-62(1939); cf. *C. A.* 33, 4969[1]. Previous explanations of color in nitrobenzyl derivs. of aromatic amines (I) (ranging from yellow to dark red or brown) as due to transformation into quinoid *aci* nitro derivs. (by migration of H to $-NO_2$ or to $-NH$), or as due to the formation of a coniugated chromophore system are considered unsatisfactory. Instead, it is postulated that the color is due to interaction, either intermol. or intramol. (not definitely decided), between the nitro-enoid system $(O_2N)_2ArCH_2$ and the auxo enoid system CH_2NHAr (auxo) to form a complex in which deformation in both of the chromophore systems occurs, with the resultant production of color. Replacement of the CH_2NH group by CH_2N reduces the color intensity, indicating that unsatn. weakens the auxo-function of the N atom in compds. of type I. Comparison of the colors of I with the corresponding nitro-azo compds. reveals that N_2N and CH_2NH have practically the same chromophore properties. 66 references.

John Lyak

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Separated auxo-enoid systems. VII. The influence of the second auxo group on the color of nitrobenzylarylamines. V. A. Izmail'skiĭ and V. I. Stavrovskaya. *J. Gen. Chem.* (U. S. S. R.) 9, 1007-14(1939); cf. *C. A.* 33, 7748[8].—In colored compds. of type $(O_2N)_n$-$ArCH_2NHAr$ (I), the color is due to interaction between the nitro-enoid system $(O_2N)_nArCH_2$- and the auxo group -NHAr. Introduction of a 2nd auxo group (OH, OMe, NMe_2) in the *p*-position to NH results in the formation of a di-auxo system, $-NHC_6H_4$ (auxo), with accentuation of the bathochromic effect. The effect on the color of NHAc and Me groups introduced in the *p*- and *m*-positions is complicated by the phenomena of chromoisomerism. The following 2,4-dinitrobenzyl derivs. are prepd. by the method of Sachs and Kempf (*Ber.* 35, 1236(1902)): 2,4-dinitrobenzylaniline (II), reddish orange, m. 94°, from 2,4-dinitrobenzyl chloride (III) and $PhNH_2$; *m*-toluidine deriv. (IV), bright orange, m. 86° from III and *m*-toluidine; *p*-toluidine deriv. (V), red, m. 101°; 3-acetaminoaniline deriv. (VI), dark red, m. 136°; 4-acetaminoaniline deriv. (VII), red or bright orange, m. 131°. V (orange) exhibits slightly greater bathochromism than either II (yellow form) or IV (orange-yellow). IV also exists as an unstable yellow form. The bathochromic effect of *p*-NHAc in VII (orange-yellow) is unexpectedly weak. VI exists as a yellow, extremely unstable form and as a dark red stable form. The marked accentuation of color obtained by introduction of a 2nd auxo group (NHAc) in the *m*-position could not be explained. I. L.

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Syntheses of derivatives of p-aminobenzenesulfonamide. N. S. Drozdov and V. I. Stavrovskaya. *J. Gen. Chem.* (U. S. S. R.) 9, 1642-67(1939); cf. C. A. 33, 8014[4].—In pursuing the study of the effect of sulfonamides on protozoa infections the following compds. were prepd. (therapeutic results will be published later): 4-Acetamino-N-δ-diethylamino-α-methylbutylbenzenesulfonamide, $AcHNC_6H_4SO_2NHCHMeCH_2CH_2CH_2NEt_2$, was obtained in 97% yield by heating 1 hr. at 100° 1.6 g. of $H_2N(CH_2)_3NEt_2$ with 2.3 g. of p-$AcNHC_6H_4SO_2Cl$ (I) in benzene. The HCl salt is a yellowish solid, bitter, insol. in benzene and ether, sol. in water, alc., acetone and dil. alkali. N-γ-(1-Piperidino)-β-hydroxypropyl analog, $AcHNC_6H_4SO_2NHCH_2CH(OH)CH_2NC_5H_{10}$ (II), was prepd. like the previous deriv. Yield of the HCl salt, 92%. A theoretical yield of the γ-diethylamino-β-hydroxypropyl compd. (III) was obtained by heating 1.5 g. $Et_2NCH_2CH(OH)CH_2NH_2$ and I for 90 min. at 100°. 4-(4'-Acetaminobenzenesulfonamido)benzenesulfon-δ-diethylamino-α-methylbutylamide, $AcHNC_6H_4SO_2NHC_6H_4SO_2NHCHMeCH_2CH_2CH_2NEt_2$, was obtained in 85% yield. A 75% yield of 4-amino-N-δ-diethylamino-α-methylbutylbenzenesulfonamide, $H_2NC_6H_4SO_2NHCHMeCH_2CH_2CH_2NEt_2$ (IV), was obtained by heating 40 min. at 100° 1 g. 4-AcNH compd. and 5 cc. of 5 N HCl. The base is a cream-colored amorphous solid, m. 198-200°. The HCl salt is a hygroscopic solid. Hydrolysis of II yielded 4-amino-N-γ-piperidino-β-hydroxypropylbenzenesulfonamide, m. 151-2°; yield, 75%. Hydrolysis of III gave 75% of 4-amino-N-γ-diethylamino-β-hydroxypropylbenzenesulfonamide. The product was a heavy oil. A 52% yield of 4-(γ-diethylaminopropylamino)benzenesulfon-δ-diethylamino-α-methylbutylamide was obtained by heating at 130-40° for 8 hrs. under anhyd. conditions 3.1 g. of IV with 2 g. of $Cl(CH_2)_3NEt_2.HCl$. The product was treated with alkali, extd. with ether and dried over KOH. Dry HCl was passed through the dry ether soln. The HCl salt is a heavy oil. A 45% yield of 4-γ-diethylaminopropylaminobenzenesulfonamide was obtained by heating at 130-40° for 14 hrs. 5.7 g. $H_2NC_6H_4SO_2NH_2$ and 6 g. of $Cl(CH_2)_3NEt_2$. The product was dissolved in hot H_2O and the base was pptd. with potash. The refined base is a red oil. An 89% yield of 4'-δ-diethylamino-α-methylbutylsulfonamidobenzeneazo-2-hydroxynaphthalene, $C_6H_4(OH)N:NC_6H_4SO_2NHCHMe(CH_2)_3NEt_2$, was obtained by dissolving 3.1 g. of IV in 4 cc. concd. HCl and 10 cc. H_2O. An aq. soln. of 0.7 g. $NaNO_2$ was slowly added to the cooled soln. When the diazotization was over an alk. soln. of 1.4 g. β-naphthol was added. On recrystn. from alc. red-orange needles, m. 158°, were obtained. A 18% yield of di-Na 2-(4'-δ-diethylamino-α-methylbutylsulfonamidobenzeneazo)-1-hydroxy-8-amino-3,6-naphthalenedisulfonate, $HO(H_2N)C_{10}H_4(SO_3Na)_2N:NC_6H_4SO_2NHCHMe(CH_2)_3NEt_2$, was obtained by diazotizing 3.1 g. of the amine and adding the diazonium soln. to a soln. of 3.2 g. H acid. The product was salted out. The salt forms dark violet crystals sol. in H_2O, slightly sol. in alc., insol. in ether, $CHCl_3$, acetone. S was detd. in all the compds. prepd.

D. Aelony

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

BC

A 4

Attempt to prepare some new antimalarial compounds. N. S. Dnozmov and V. I. Stavrovskaja (Compt. rend. Acad. Sci. U.R.S.S., 1939, 23, 61—63).—A no. of compounds, several of them derivatives of p-aminobenzenesulphonamide, have been prepared and found ineffective against malaria of birds.

E. M. W.

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PROCESSES AND PROPERTIES INDEX

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Chemical structure and parasiticidal activity. II Desalkoxylated chemotherapeutic substances of the quinoline and acridine series. K. S. Topchiev, V. I. Stavrovskaya, and A. F. Bekhli (Acad. Med. Sciences). *J. Applied Chem.* (U.S.S.R.) 19, 1344-9(1946)(in Russian); cf. *C.A.* 41, 6886b.—To det. the role of the alkoxy group in antimalarials, 7 compds., Fourneau 710, plasmochin, quinine, atebrin (acrichine), 2-methoxy-6-chloro-9-(3-diethylamino-1-methylpropylamino)acridine, 2-methoxy-6-chloro-9-(4-diethylaminobutylamino)acridine, and rivanol, were studied against the corresponding 7 desalkoxylated compds. The results obtained agreed with those of Fourneau on his 710 and 728, and some other investigators: that the alkoxy group is not a detg. factor in the specificity of an antiplasmodic compd. In the majority of instances these compds. were equal to their alkoxy analogs. In several instances the MeO group seemed to level off some toxic effects (quinine-cinchonine), but had no influence on compds. of high chemotherapeutic index (710 and 728). The desalkoxylated analogs of atebrin and I had a better soly. and lesser coloring intensity.

Boris Gutoff

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No 17T36

USSR/Medicine - Malaria May/Jun 1947
Medicine - Chemotherapy

"Sulfamide Derivatives in Malaria Treatment," V. I. Stavrovskaya, Department of Synthetic Preparations of the Institute of Malaria and Medical Parasitology and Helminthology of the Academy of Medical Sciences, USSR, 8 pp

"Meditsinskaya Parazitologiya" No 3

Discussion, fully illustrated with diagrams of the compounds, of work done in the field by scholars of all nations, including a Hindu named B. B. Dikshit.

17T36

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The recently discovered analogs of the antimalarial substances of the quinoline series. V. I. Stavroyskaya and K. S. Topchi'ev. *Doklady Akad. Nauk S.S.S.R.* **58**, 237-40(1947); *Chem. Zentr.* **1948**, II, 240-50; cf. *C.A.* **42**, 1270h.—Substances of the quinoline series having a ruptured pyridine ring (—C:C— or —C:N—) were synthesized and their action on avian malaria was investigated. *3-Nitro-4-[propyl(p-tolylenesulfonyl)amino]anisole* (I), $C_{17}H_{20}O_5N_2S$, prepd. by heating 3,4-$O_2N(p\text{-}MeC_6H_4SO_2NH)$-$C_6H_3OMe$, PrBr, and K_2CO_3 in abs. alc., needles, m. 106°. Heating I with concd. H_2SO_4 yielded *3-nitro-4-(propylamino)-anisole*, as an oil b. 185-7°, reduced with Sn and HCl to the *3-amino compd.* (II), crystals with silvery luster, m. 64°. Treating II with $Et_2N(CH_2)_3Cl$ yielded *4-methoxy-N²-(3-diethylaminopropyl)-N¹-propyl-o-phenylenediamine*, oil, b. 146-5°, showing *antimalarial activity*. *m-Aminophenylpropanol*, (III), obtained by the hydrogenation of Et *m*-aminocinnamate with Na in abs. alc., oil b. 168-74°; *HCl salt*, m. 118°. Heating III with HBr yielded *m-amino(3-bromopropyl)benzene*, which, heated with Et_2NH in alc., yielded *m-amino-(3-diethylaminopropyl)benzene* (IV), oil, b. 197-200°. Heating IV with $Et_2N(CH_2)_3Cl$ yielded *1-(3-diethylaminopropylamino)-3-(3-diethylaminopropyl)benzene*, oil, b. 240-5°, showing no antimalarial activity. M. G. Moore

1951

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Brit Abs H II
May 1953
Homocyclic

Chem 3
(2)

Structure of Einhorn's "5-nitro-2-hydroxybenzyldiethylamine." K. S. Topchiev and V. I. Stavrovskaya (*C. R. Acad. Sci. U.R.S.S.*, 1949, **69**, 193—195).—*p*-$NO_2 \cdot C_6H_4 \cdot OH$, $NHEt_2$, and 38% aq. CH_2O at 80°, or 5-nitro-2-hydroxybenzyl chloride and $NHEt_2$ in EtOH, at the b.p., give *5-nitro-2-hydroxybenzyldiethylamine*, $C_{11}H_{16}O_3N_2$ (I), m.p. 87° (*hydrochloride*, m.p. 223—224°). The methylene ether of 5-nitrosaligenin and $(CH_2Cl)_2O$ with $ZnCl_2$ at 100° give the *methylene ether* of *5-nitro-2-hydroxy-3-chloromethylbenzyl alcohol*, $C_{15}H_{18}O_4N_2$, m.p. 68°, erroneously described by Einhorn *et al.* (*Ann.*, 1905, **343**, 245) as I above.

R. TRUSCOE.

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USSR/Chemistry - Antimalarials Mar 51

"Structure of Einhorn's '2-Hydroxy-5-Nitrobenzyl-diethylamine,'" V. I. Stavrovskaya, K. S. Topchiyev, Inst Malaria, Med Parasitol, and Helminthol, Min Pub Health USSR

"Zhur Obshch Khim" Vol XXI, No 3, pp 525-532

176T29

Step in synthesis of antimalarials: Synthesized 2-hydroxy-5-nitrobenzyldiethylamine (I) by Mannich reaction from n-nitrophenol, formaldehyde, and diethylamine, and by reaction of 2-hydroxy-5-nitrobenzylchloride with diethylamine. Found compd described as I by Einhorn in 1905 to be really 3-diethylaminomethyl-5-nitrosaligeninmethylene ester (II).

[redacted] 176T29

USSR/Chemistry - Antimalarials (Contd) Mar 51

Found method to obtain 3-chloromethyl-5-nitrosaligeninmethylene ester and to synthesize II from it.

[redacted] 176T29

STAVROVSKAYA, V. I.

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Chemical structure and parasitocidal activity. X. Effect of peculiarities of structure of the side-chain cyclic substituent on antimalarial activity of derivatives of the quinoline and acridine series (the role of the location of the methylene group). Y. L. Stavrovskaya (Ministry Health, Moscow). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 21, 1721-6 (1951); cf. *C.A.* 44, 6023c.—Compds. of the type of 2-methoxy-6-chloro-9-(diethylaminomethylarylamino)- (or diethylaminomethylphenylenealkylamino)acridines possess high antimalarial activity due to replacement of the aliphatic side chain amino group by an alkaryl structure; a CH_2 group between the aromatic amine and the Et_2N group causes considerable activity, and removal of this group or its translocation to the position between the heterocyclic ring and the aromatic amine lowers the activity. Letting 24 g. *m-$O_2NC_6H_4CHO$* stand 6 days in 120 ml. MeOH and 1% HCl gave 85% *di-Me acetal*, b_{10} 162-3°, which (12 g.) added dropwise to 40 g. Na_2S in 40 ml. H_2O and 20 ml. concd. HCl, then boiled 6 hrs., gave the *amino analog*, an oil; this (20.5 g.) heated 8 hrs. in EtOH with 36 g. EtI, 35 g. Na_2CO_3, and 135 ml. H_2O, then dild. with EtOH, concd., filtered, the filtrate extd. with Et_2O and the Et_2O with 20% HCl gave 58% *m-(diethylamino)benzaldehyde*, b_4 131-32°, which in aq. EtOH-KOH soln. with formalin gave after 1 hr. at 40° *m-(diethylamino)benzyl alc.*, 83%, b_4 135°, yielding with PCl_5 64% of the *chloride*, b_3 120° (*picrate*, m. 111-12°; *HCl salt*, m. 124°). This (10.1 g.) and 6-methoxy-8-aminoquinoline (8.9 g.) after 30 hrs. at 135-45° gave 39% *6-methoxy-8-[m-(diethylamino)benzylamino]quinoline*, b_4 235-45°, dipicrate, m. 160°. The above benzyl chloride (19.7 g.), 14.7 g. phthalimide, and 6.9 g. K_2CO_3 in 4 hrs. at 180-5° gave 80.5% *N-[m-(diethylamino)benzyl]phthalimide*, b_3 238-42°, which, heated 1 hr. with $N_2H_4.H_2O$ in EtOH, concd., boiled 1 hr. with 20% HCl, and worked up as usual, gave 50% *m-(diethylamino)benzylamine*, b_{3-4} 122-3°; *HCl salt*, decomp. 240°; *picrate*, m. 145-6°. This heated with 2-methoxy-6,9-dichloroacridine in PhOH gave *2-methoxy-6-chloro-9-[m-(diethylamino)benzylamino]acridine*, m. 104°; *di-HCl salt*, m. 252-4° (decompn., from EtOH). When *m-$H_2NC_6H_4CH(OMe)_2$* was distd. at insufficiently low pressure it decomposed, yielding a yellow viscous substance, probably a polycondensation product formed by loss of 1 MeOH; dissolved in HCl and alkali it pptd. a polymer of *m-$H_2NC_6H_4CHO$*, which with MeOH-HCl reverted to the original acetal.

G. M. Kosolapoff

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USSR/Chemistry

Card : 1/1

Authors : Stavrovskaya, V. I.

Title : Mobility of the diethylamino group: Part 1. - Transamination of benzyldiethylamine

Periodical : Zhur. Ob. Khim., 24, Ed. 6, 1038 - 1040, June 1954

Abstract : Tests showed that benzyldiethylamine enters into transamination reaction with many aromatic amines, forming substitutes of N-(benzyl)-aniline and diethylamine. The yield of the reaction product increases during the introduction into the aromatic amine, of such substitutes as Cl, OCH_3, CH_3, and decreases when the amine contains the NO_2-group. The position of the substitute in chloraniline and toluidine has no great effect on the yield of N-(benzyl)-aniline substitutes. Six references; 2 German from 1902, 1914. Table.

Institution : Ministry of Health USSR, Institute of Malaria, Parasitology and Helminthology.

Submitted : January 23, 1954

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STAVROVSKAYA, V.I.

Synthesis of 5-nitrosaligenin and its ethers. V. I. Stavrovskaya. *Zhur. Obshchei Khim.* 24, 2003-10(1954).—Refluxing 3-diethylaminomethyl-5-nitrosaligenin cyclic methylene ether (I) (cf. *C.A.* 45, 8475*f*) (2 g.) in 5 ml. 1:1 H_2SO_4 1 hr. gave CH_2O and 1.2 g. *3-diethylaminomethyl-5-nitrosaligenin*, m. 81-2° (from C_6H_6); *HCl salt*, decomp. 166-7°. Refluxing 5-nitrosaligenin methylene ether in EtOH in the presence of H_2SO_4 6 hrs. gave 1.4 g. *2,4-(EtOCH$_2$)(O$_2$N)-C$_6$H$_2$OH*, m. 85°. Similar reaction in MeOH gave the *MeO analog*, m. 109°. I with MeOH gave *2,4,6-MeOCH$_2$(O$_2$N)-(Et$_2$NCH$_2$)C$_6$H$_2$OH*, m. 80.5-1°, while EtOH gave the *EtO analog*, m. 125° (cf. Einhorn, *et al.*, *Ann.* 343, 245 (1905)).

G. M. Kosolanoff

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STAVROVSKAYA, V. I.

Synthesis of 5-nitrosaligenin and its ethers. V. I. Stavrovskaya. J. Gen. Chem. U.S.S.R. 24, 2037-7(1954) (Engl. translation).—See C.A. 49, 14670c. B. M. R.

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"APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001653020008-6

STAVROVSKAYA, V.I.

Synthesis of 5-nitrosaligenin and its esters. Zhur.ob.khim.24 no.11:2068-2070 N '54. (MIRA 8:3)

1. Institut malyarii, meditsinskoy parazitologii i gel'mintologii. (Saligenin)

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STAVROVSKAYA, V. I.

"Chemical Structure and Parasiticidal Activity. XIV. Acridine Compounds with Cyclic Side Substituents Added to the Ring Via the NH Group", J Gen Chem USSR, 25(1):193-98 (January)

"Chemical Structure and Parasiticidal Activity. XV. Quinoline Derivatives with the Side Cyclic Substituents Connected to the Nucleus at the 4-Position Through the NH Group", J Gen Chem USSR, 25(2):331-36. (February) 1955)

"Chemical Structure and Parasiticidal Activity. XVI. 8-Arylamino-quinolines", J Gen Chem USS USSR 25(2):337-43 (February 1955).

"Chemical Structure and Parasiticidal Activity. XVII. Effect on Antimalarial Activity of Replacement of the Diethylamino Group in a Lateral Cyclic Substituent by a Cyclic Amine (in Compounds of theQuinoline and Acridine Series)" J Gen Chem USSR, 25(4):831-33 (April 1955).

"Chemical Structure and Parasiticidal Activity. XVIII. Substituted Benzyl Diethylamines", J Gen Chem USSR, 25(5):951-55 (May 1955).

SO: A-3074341, 13 Feb 1957

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STAVROVSKAYA, V. I.

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Chemical structure and parasitocidal activity. XIV. Acridine compounds with cyclic side chains connected to the ring through an NH group. V. I. Stavrovskaya (Malaria, Med. Parasitol. and Helminthol. Inst., Moscow). *Zhur. Obshchei Khim.* 25, 193-9; *J. Gen. Chem.* (U.S.S.R.) 25, 177-81 (1955) (English translation); cf. *ibid.* 24, 2068 (1954); *ibid.* 49, 5179h. Replacement of aliphatic diamine group in substituted acridines by an $Et_2NCH_2C_6H_4NH$ group or its derivs. leads to antimalarials with schizotropic action whose toxicity is below that of acriquine while the activity is similar or higher than that of acriquine. 3-Et_2NCH_2-C_6H_4NH group leads to a distinct antimalarial activity; an HO or MeO in the 4-position of the benzene ring increases the activity, while a 2nd Et_2NCH_2 group at the 5-position also raises the activity somewhat. The reaction of 2-methoxy-6,9-dichloroacridine (I) with *m*-$H_2NC_6H_4CH_2NEt_2$ in PhOH gave *2-methoxy-6-chloro-9-(3-diethylaminomethylphenylamino)acridine*, m. 167-8°; *di-HCl salt*, m. 252-3°. Similarly was prepd. *2-methoxy-6-chloro-9-(2-diethylaminomethylphenylamino)acridine (mono-HCl salt*, m. 210-11°); *2-methoxy-6-chloro-9-(4-diethylaminomethylphenylamino)acridine (di-HCl salt*, m. 263-5°); *2-methoxy-6-chloro-9-(2-phenyl-1-methylethylamino)acridine (mono-HCl salt*, m. 199-200°). Refluxing 23.6 g. 2,5-HO(AcNH)-$C_6H_3CH_2NEt_2$, with 50 ml. 20% HCl 1 hr., cooling, neutralizing with 40% NaOH, acidifying to Congo red with H_2SO_4, adding 27.8 g. I and heating 2 hrs. at 100° gave 82% *2-methoxy-6-chloro-9-(3-diethylaminomethyl-4-hydroxyphenylamino)acridine*, orange, m. 175°; *di-HCl salt dihydrate*, m. 179-80° (decomp.). I and 3-diethylaminomethyl-4-methoxyaniline in PhOH gave 95% *2-methoxy-6-chloro-9-(3-diethylaminomethyl-4-methoxyphenylamino)acridine*, m. 98-100°; *di-HCl salt dihydrate*, m. 201-2°. 4,3,5-HO(Et_2NCH_2)C_6H_2NHAc (6.4 g.), refluxed 1 hr. with 10 ml. 20% HCl, cooled, neutralized with NaOH, acidified weakly with H_2SO_4 and heated with 5.6 g. I 2 hrs. at 100° gave 10.2 g. *2-methoxy-6-chloro-9-[3,5-bis(diethylaminomethyl)-4-hydroxyphenylamino]acridine* (II), m. 143-44°; *tri-HCl salt*, decomp. 233-5°. Stirring 7 g. 2-methoxy-6-chloro-9-(4-hydroxyphenylamino)acridine, 4 ml. formalin, 15 ml. Et_2NH, and 100 ml. EtOH 11 hrs. on a steam bath, filtering off unreacted material and extg. with Et_2O gave *2-methoxy-6-chloro-9-[3,5-bis(diethylaminomethyl)-4-hydroxyphenylamino]acridine*, m. 143-4°, and *2-methoxy-6-chloro-9-(3-diethylaminomethyl-4-hydroxyphenylamino)acridine*, m. 174-5°, sepd. by elution with Et_2O; the former was the more sol. substance. The cyclic methylene ether of 4,5,3-HO($HOCH_2$)-(Et_2NCH_2)$C_6H_2NH_2$ (III) and I in weakly acid soln. gave 80% *2-methoxy-6-chloro-9-(5-diethylaminomethyl-1,3-benzodioxan-7-ylamino)acridine*, m. 113-14°; *di-HCl salt monohydrate*, m. above 270°. Heating I with III in weakly acid soln. gave in 2 hrs. *2-methoxy-6-chloro-9-(3-diethylaminomethyl-4-hydroxy-5-hydroxymethylphenylamino)acridine*, isolated as the *dipicrate*, decomp. 174-6°. II was the most effective antimalarial.

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STAVROVSKAYA, B.I.

Mobility of the diethylamino group. Part 2. Synthesis α-methylpyrrolidine. Zhur.ob.khim. 25 no.1:148-150 Ja '55. (MIRA 8:4)

1. Moskovskiy institut malyarii, meditsinskoy parazitologii i gel'mintologii Ministerstva zdravookhraneniya SSSR.
(Pyrrolidine)

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STAVROVSKAYA, V. I.

USSR

Chemical structure and parasiticidal action. XIV. Acridine compounds with cyclic substituents linked to the nucleus by the NH-group. V. I. Stavrovskaia (*Zh. obshch. Khim.*, 1955, 25, 193—199).—With a view to further development of antimalarial drugs, the known synthesis of acridines with a side-chain of aliphatic diamines was used to prepare acridine derivatives with cyclic-substituted amines, combined through the NH-group at position 9 in the ring. The structures and m.p. of 9 new compounds thus synthesized are shown in a table. It was found that the replacement of aliphatic diamines by *m*-aminobenzyldiethylamines, e.g., in the prep. of 6-*chloro*-2-*methoxy*-9-*m*-*diethylaminomethylanilino*-*acridine*, $C_{24}H_{28}ON_3Cl$, m.p. 107—108°, and its *dihydrochloride*, $C_{24}H_{28}ON_3Cl_3$, m.p. 253—254°, leads to antimalarial compounds with schizotropic effect, similar to (in some cases 2—3 times higher) that of atebrin but of lower toxicity. The antimalarial action was considerably increased by further introduction of hydroxy- and methoxy-groups in the *p*-position to the NH-group, e.g., 2-methoxy-6-chloro-9-(3'-diethylaminomethyl-4'-*hydroxyanilino*)*acridine*, $C_{25}H_{26}O_3N_3Cl$, m.p. 175°, and -4'-*methoxyanilino*)*acridine*, $C_{26}H_{28}O_3N_3Cl$, m.p. 98—100°, and by further addition of a second diethylamino group in the *o*-position to the hydroxyl- and *m*-position to the NH-group: e.g., 2-*methoxy*-6-*chloro*-9-[3' : 5'-*bis*-(*diethylaminomethyl*)-4'-*hydroxyanilino*]*acridine*, $C_{30}H_{42}O_3N_4Cl$, m.p. 143—144°. The syntheses of the above compounds are described.

L. S.

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STAVROVSKAYA, V. I.

Chemical structure and parasiticidal activity. XV. Quinoline compounds with cyclic substituents connected to the nucleus in the 4-position through an NH group. V. I. Stavrovskaya (Inst. Malaria, Med. Parasitol. and Helminthol., Ministry of Health, Moscow). *Zhur. Obshchei Khim.* 25, 331-4; *J. Gen. Chem. U.S.S.R.* 25, 313-17(1955)(Engl. translation); cf. *C.A.* 50, 1816*c*.—The antimalarial activity of the following quinolines with cyclic substituents at a 4-NH_2 group exceeds that of chloroquine severalfold, while their toxicity is below that of chloroquine. An HO or MeO group in the cyclic substituent improves the antimalarial activity, which is further improved by a symmetrically located Et_2N group. The following *4-RNH* derivs. (I) of *7-chloroquinoline* were prepd. Heating 2 g. 4,7-dichloroquinoline (II) and 2 g. *m*-$H_2NC_6H_4CH_2NEt_2$ 18 hrs. at 160–80°, extn. with 50% AcOH, treatment of the filtrate with NaOH, extn. with Et_2O, and evapn. of the ext. gave I, R = *3-$Et_2NCH_2C_6H_4$*, m. 158° (from C_6H_6-petr. ether); *di-HCl salt dihydrate*, m. 126–8°. Refluxing 2.36 g. 2,5-HO(AcNH)$C_6H_3CH_2NEt_2$ 1 hr. with 5 ml. 20% HCl, neutralizing with NaOH, adjusting to weak acidity with HCl, heating the mixt. with 2 g. II 2 hrs. at 100°, adding NH_4OH, and extg. with $CHCl_3$ gave 80% I, R = *4,3-HO(Et_2NCH_2)-C_6H_3*, m. 207°; *di-HCl salt monohydrate*, m. 193–4°. Heating 2.5 g. 2,5-MeO(H_2N)$C_6H_3CH_2NEt_2$ with 2.3 g. II 12 hrs. at 160–70° gave after the usual treatment 87% I, R = *4,3-MeO(Et_2NCH_2)C_6H_3*, m. 201–2°; *di-HCl salt hydrate*, decomp. 198–9°. Heating 7.9 g. *p*-$H_2NC_6H_4OH$ sulfate with 45 ml. H_2O and 9.9 g. II 3 hrs. at 100° and treatment with H_2O and NH_4OH gave 100% I, R = *4-HOC_6H_4*, m. 265–6°. This (8.1 g.), 7 ml. formalin, 45 ml. Et_2NH, and 80 ml. EtOH refluxed 6 hrs., concd., taken up in 10% HCl, decolorized, and pptd. with NH_4OH gave a crude product, which by 2 extns. with Et_2O yielded 76% I, R = *4,3,5-HO(Et_2NCH_2)$_2C_6H_2$* (III), m. 162–3°. The Et_2O-insol. residue was I, R = *4,3-HO(Et_2NCH_2)C_6H_3*, m. 183–4° (from dil. Me_2CO), which gave III on heating with formalin, Et_2NH, and EtOH 6 hrs. on a steam bath. III was also formed in 89% yield from 3.2 g. 4,3,5-HO(Et_2NCH_2)-C_6H_2NHAc refluxed 1 hr. with 5 ml. 20% HCl, neutralized with NaOH, made slightly acid with HCl, and heated with 2 g. II on a steam bath. Pure III, m. 162–3°; *tri-HCl salt*, yellow, hygroscopic solid; *oxalate*, $C_{22}H_{32}ON_4Cl.1.5H_2C_2O_4.5H_2O$, decomp. 154–5°. Heating 3 g. 3-diethylaminomethyl-5-aminosaligenin methylene ether and 2 g. II in 5 ml. H_2O 2 hrs. on a steam bath gave after the usual treatment 75% I, R = *8-diethylaminomethyl-1,3-benzodioxan-6-yl*, m. 177°; *oxalate*, $C_{15}H_{22}O_4N_2Cl$, yellow, decomp. 198°. Heating 4,5,3-HO($HOCH_2$)(Et_2NCH_2)$C_6H_2NH_2$ with II in a weakly acidic medium, as above 2 hrs. on a steam bath gave I, R = 4,5,3-HO($HOCH_2$)(Et_2NCH_2)-C_6H_2, isolated as the *picrate*, decomp. 162–4° (from dil. Me_2CO). XVI. 8-Arylaminoquinolines. *Zhur. Obshchei Khim.* 25, 337–43; *J. Gen. Chem. U.S.S.R.* 25, 319–24 (1955)(Engl. translation).—Heating 4 g. *o*-$C_6H_4(NO_2)_2$ and 3 g. *p*-$H_2NC_6H_4CH_2NEt_2$ 10 hrs. to 140–5° under an air-cooled condenser, treatment with 10% HCl, sepn. of the acid ext., neutralization with NaOH, and extn. with Et_2O gave 3.7 g. *2-(4-$Et_2NCH_2C_6H_4NH$)$C_6H_4NO_2$*, which could not be distd.; *picrate*, m. 85–7°. The free base (3 g.) in 11 ml. concd. HCl treated with 9.7 g. $SnCl_2$ in concd. HCl, kept 2 hrs. at room temp., then treated with 40% NaOH and extd. with Et_2O, yielded 2.5 g. oily *2-(4-Et_2-$NCH_2C_6H_4NH$)$C_6H_3NH_2$*; *picrate*, m. 128°. This (4.3 g. crude base), 7 ml. $HOCH(CH_2OH)_2$, 5 ml. concd. H_2SO_4,

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V. I. STAVROVSKAYA

and 2.5 ml. $PhNO_2$ heated 4 hrs. (energetic initial reaction), dild. with H_2O, extd. with Et_2O, NaOH, added to the aq. soln., then HCl, and the ppt. purified with C gave 0.8 g. viscous oily *8-RNH deriv.* (I) (R = *4-$Et_2NCH_2C_6H_4$*) of *quinoline* (*picrate*, m. 216°). *o*-$C_6H_4(NO_2)_2$ and *m*-$H_2NC_6H_4CH_2NEt_2$ after 11 hrs. at 100° gave 8.4 g. oily *2-(3-$Et_2NC_6H_4NH$)$C_6H_4NO_2$* (*picrate*, m. 142°), reduced by $SnCl_2$-HCl to the *2-amino analog* [*picrate*, m. 160–1° (from H_2O)], which in a Skraup reaction, as above, gave a poor yield of oily I (R = *3-$Et_2NCH_2C_6H_4$*) [*picrate*, m. 204–5° (from EtOH)]. *m*-$H_2NC_6H_4CH_2NEt_2$ (6.7 g.) and 20 ml. H_2O treated with 2.6 g. SO_2 and refluxed 30 hrs. with 8-hydroxyquinoline gave some 4.5 g. unchanged amine, as well as unchanged quinoline. Heating 25.2 g. 6-methoxy-8-aminoquinoline and 13.2 g. *p*-$HOC_6H_4NH_2$ in a sealed tube 5 hrs. at 185–90°, extn. with hot H_2O, treatment of the solid residue with NH_4OH and extn. with Et_2O gave from the Et_2O soln. some 38% *8-RNH deriv.* (II) (R = *p*-HO-C_6H_4) of *6-methoxyquinoline*, yellow but rapidly darkening in air, m. 110–12° (decomp. 118–20°) [*picrate*, decomp. 169–70° (from EtOH)]. The aq. ext. yielded small amts. of $(p\text{-}HOC_6H_4)_2NH$ and the starting materials, while the Et_2O-insol. fraction gave 1.8 g. II (R = *6-methoxy-8-quinolyl*), m. 167–9°; some very insol. black material, m. about 300°, was also isolated. II (R = *p*-HOC_6H_4) (8.5 g.), 7 ml. formalin, 30 ml. Et_2NH, and 30 ml. EtOH refluxed 5 hrs. gave after concn., treatment with 10% HCl, and neutralization of the ext. with NH_4OH, a red product which was extd. with Et_2O; the ext. gave 6 g. II [R = *4,3,5-HO-$(Et_2N)_2C_6H_2$*], decomp. 110–12° (from dil. EtOH) (*di-HCl salt trihydrate*, orange, decomp. 200–2°). The Et_2O-insol. material extd. with EtOAc yielded an unstated amt. of II (R = *3-$Et_2NCH_2C_6H_4$*), decomp. 188–90° (*HCl salt trihydrate*, a brown solid). Heating 7 g. II (R = H) with 8.4 g. of its HCl salt in a sealed tube 11 hrs. at 170–5° gave, after the usual treatment, 7.3 g. H (R = *6-methoxy-8-quinolyl*), m. 168–70°; *HCl salt*, decomp. 287–90°. The substances were inactive against avian malaria. G. M. K.

4

Synthesis of secondary 6-quinolylcarbinols. B. P. Lugovkin (Sci. Research Labor Protection Inst., All-Union ~~Central Council Trade Unions, Kazan~~). ~~Zhur. Obshchei Khim. 25, 392–7(1955)~~; ~~J. Gen. Chem.~~ (*U.S.S.R.*) 25, 371–4(1955)(Engl. translation); cf. *C.A.* 49, 326*a*.—Refluxing 12.7 g. 6-quinolinecarboxaldehyde (I) 1 hr. with MeMgI (from 17.6 g. MeI), treatment with dil. HCl, neutralization of the acid soln. with NH_4OH, salting out, and extn. with Et_2O gave 52% *6-quinolylmethylcarbinol*, m. 69–71°; *picrate*, m. 176–7°. Heating the carbinol with MeI on a steam bath 0.5 hr. gave the *methiodide*, m. 176–7°; *ethobromide*, m. 143°. Oxidation of the carbinol with CrO_3-AcOH gave 39.5% *Me 6-quinolyl ketone*, m. 75–6°; *picrate*, m. 236°; *methiodide*, m. 225°; *phenylhydrazone*, m. 166°. I and EtMgI gave similarly 65.1% oily *6-quinolylethylcarbinol*; *picrate*, m. 152°; *methiodide*, m. 165–6°; *ethobromide*, m. 168°. Oxidation of the carbinol as above gave *Et 6-quinolyl ketone*, m. 76–7°; *picrate*, m. 209°; *methiodide*, m. 204°; *phenylhydrazone*, m. 134–5°. I and PhMgBr gave 53% *6-quinolylphenylcarbinol*, m. 102–3° (from EtOH); *picrate*, m. 177–8°; *methiodide*, m. 146–7°; *ethobromide*, m. 204°. Oxidation of the carbinol gave *6-quinolyl Ph ketone*, m. 63°; *picrate*, m. 219°; *methiodide*, m. 214–15°; *phenylhydrazone*, m. 165–6°. I and 1-$C_{10}H_7MgBr$ gave 34.3% *6-quinolyl-1-naphthylcarbinol*, m. 212°; *picrate*, m. 177°; *methiodide*, m. 240°; the *ethobromide* could not be formed even in 12 hrs. at 110°. G. M. Kosolapoff

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