

20227

S/135/61/000/004/006/012
A006/A101

1 2300

AUTHORS:

Shavkunov, A. V., Aksenov, N. A., Mugerman, Yu. N., Kolchinskly,
V. I. Engineers

TITLE:

Welding of Titanium Alloys in Chambers with Controlled Atmosphere

PERIODICAL:

Svarochnoye proizvodstvo, 1961, No. 4, pp. 24 - 25

TEXT:

The high chemical activity of titanium and its alloys requires careful protection of the weld and the weld-adjacent zone against the gaseous atmosphere. When welding parts of complex contours it is recommended to carry out welding in special chambers. Information is given on manual argon arc welding of titanium-alloy and titanium parts in chambers of two types. Chamber No. 1 is a 0.05 m³ 1Kh18N9T steel cylinder of 1,300 mm internal diameter and 400 mm height. The cylinder top represents a cover fastened with bolts. The chamber is placed on a rotary table and can be rotated around the horizontal axis. In the top and in the walls there are plexiglass windows and apertures for fastening the rubber welding gloves. The chamber is equipped with electric light. The welding burner is fed through a cable which enters the chamber through a special hermetic inlet. The burner is a holder with a tungsten electrode. The absence of a nozzle

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permits the access to any welding area. The chamber is connected with a vacuum pump, an argon cylinder and an oil manometer. The feed system and the electric circuit are given in Fig. 2 and 3. Chamber No. 2 is made of 15 mm thick "20" grade steel and differs from chamber No. 1 by larger dimensions, which makes it possible to weld large-size parts. The dimensions are: 2100 mm diameter; 600 mm height; 1.8 m^3 volume. Two parallel operating vacuum pumps are employed. The vacuum up to $3 \cdot 10^{-2}$ mm Hg is produced within 120 - 150 min. Gas consumption for washing is about 2.5 m^3 . Prior to operation the chamber is blown through with compressed air and rubbed with an alcohol-wetted rag. To fill the chamber, argon of first composition is employed containing not over 0.005% oxygen and not over 0.1% nitrogen. Locksmith tools, base material, technological plates and BT-1 (VT-1) 2 mm-diameter titanium wire are then placed into the chamber and the cover is fastened. After evacuation argon is fed into the chamber at a pressure not less than 0.2 atm. During welding process 1 - 3 l/min argon are supplied into the chamber. Parts of commercial VT-1 titanium, OT-4 and BT-5 (VT-5) titanium alloys can be welded. VT-1 filler wire is employed, which is dehydrogenized in a vacuum of 10^{-3} mm Hg by heating to 950°C . Welding in the described chambers produces high-quality weld joints, whose strength is equal to that of the base metal. The

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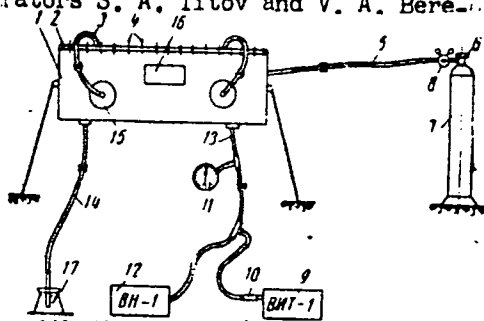
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bending angle is $160 - 180^\circ$. The present article was composed with the participation of engineers M. P. Korneyev, V. I. Chernov, S. Ye. Makarov, Ye. P. Saymukova, senior master B. K. Lukash, welding operators S. A. Titov and V. A. Beresovskiy. There are 3 figures.

Figure 2: Diagram of feeding the chamber for welding in shielding gas: 1 - body of the chamber; 2 - cover; 3 - hose connecting the chamber with the gloves; 4 - bolts; 5 - hose connecting the chamber with the cylinder; 6 - cylinder valve; 7 - argon cylinder; 8 - PK-53 (RK-53) reductor; 9 - BHT-1 (VIT-1) thermovacuummeter; 10 - LM-2 (IM-2) or LT-4M (LT-4M) tube; 11 - monovacuummeter; 12 BH-1 (VN-1) vacuum pump; 13 - hose, connecting the chamber with the pump; 14 - hose connecting the chamber with the bull-bar; 15 - cover for the glove; 16 - window with protecting glass; 17 - bull-bar



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Figure 3:

Electric circuit diagram of the chamber for welding in shielding gas; PБ (RB) + RB-300) ballast rheostat; Dr-throttle; 1K, 2K, 3K and 4K- magnetic starters, a) - pump motors; b) motor; c) generator; d) - oscillator; e) - foot starter

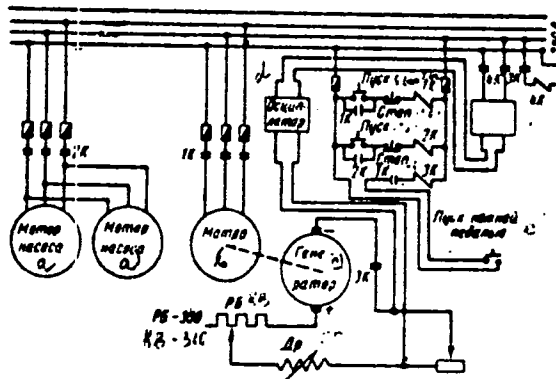


Рис. 3. Электрическая схема камеры для сварки и защитные газы: PБ — реостат балластный RB-300; Др — дроссель; 1K, 2K, 3K и 4K — магнитные пускатели.

Card 4/4

MUGERMAN, Yu.N., inzh.

Argon-arc welding with automatic control of the arc length.
Svar.proizv. no.4:23-25 Ap '64. (MIRA 18:4)

MIGERMAN, Yu.N., inzh.; AGAFONOV, S.K., tekhnik

Automatic welding up of a crater. Svar. proizvod. no.1:32-33 Ja 195.
(SFA 18:3)

MUGHA T.

ALEKSANDROWICZ J., GRAPCZYNSKA Z., GUTMANOWA I., KUKLAB., JOZWA J., MUGHA T. AND PACHONSKA J. Univ. in Cracow. Wplyw iperytu azotowego na usterpowanie porazen w. gruzliczym zapaleniu opon mozgowo-radzeniowych leczonych streptomycyna the influence of nitrogen mustard on the regression of paralysis in cerebrospinal meningitis treated with streptomycin Polsk. Tey.Lek. 1949, 4/40 (1131-1132)

A decrease of paralysis in TB spondylitis, observed a few hours after the administration of nitrogen mustard, encouraged the authors to investigate its influence on other paralytic states especially in the course of TB. There regression of paralysis in 6 children treated in Clinic for Children's Diseases in Warsaw. This chemical compound was also found to cure paralysis of the peripheral nerves in meningitis of some week's standing but it does not prevent the development of paralysis. Nitrogen mustard was use intravenously in doses of 0.01 g. per kg. body weight daily, repeating doses ever 24 hours from 2-3 times. The therapeutic results are perhaps due to the resorptive and anti-inflammatory action of the chemical, or to irritant action on the nervous tissue. The latter hypothesis is confirmed by observations of certain effects on paralysis of various origin (peripheral neuritis, radiculitis, crania nerve palsy, also in spastic contractures is rheumatoid arthritis) and by some evidence of relief in cases with the clinical symptoms of optic verved atrophy (observed in the optahlomtlogical clinical of Jagiel University). It may be that in the phenomena described there is a chain of reactions, one link of which is the specific action of the nervous system and through it, diminution of the clinical symptoms of inflammation.

Aleksandrowicz - Cracow

So: Neurology Psychiatry Section VIII, Vol. 4, No. 1-6

L 20713-65 EWT(m)/EWF(b)/EWA(d)/EWF(t) ASD(m)-3 JD/WB
ACCESSION NR: AR3010290 6/0081/63/000/012/0422/0423

SOURCE: RZh. Khimiya, Abs. 12K140

AUTHOR: Mughilov, M. F.

TITLE: The effect of micro- and macro-couples on the parameters of electrochemical protection B

CITED SOURCE: Tr. Vses. mezhdug. nauchn. konferentsii po vopr. bor'by s korrozivay, M., Gostoptekhizdat, 1962, 187-193

TOPIC TAGS: corrosion prevention, soil corrosion, electrocorrosion, electro-chemical protection, sea water corrosion, steel corrosion, soil moisture content

TRANSLATION: The use of a constant-current-and-voltage device has made possible a clarification of the difference between electrochemical protection in sea water and in soil. The principal difference between the behavior of steel in sea water and in soil at constant potential is the fact that the current flow increases with time in the soil but decreases in sea water. Tests carried out with the aid of the constant-current-and-voltage device showed that a negative displacement of the potential by 100 mv is sufficient to prevent corrosion of steel in pure sea water

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ACCESSION NR: AR3010290

and in homogeneous soil with a moisture content of 10-25%. The current density at which corrosion was prevented was 0.5 ma/dm² for sea water, 0.4 ma/dm² for soil with a 25% moisture content and 1.0 ma/dm² for soil with a 10% moisture content. The criterion of cathodic protection of the samples during prolonged polarization in soil was a shift of the potential in the direction of more negative values during depolarization. During depolarization, the potential shifted in the direction of more positive values compared to the stationary state. As the pH of the layer nearest the electrode decreased, the electrode potential approached that in the stationary state. The magnitude and duration of this shift in potential in the soil increased with an increase in the density of the polarizing current and the duration of polarization. The effect of electrochemical protection is therefore not brought about merely by polarization, producing a decrease in the potential difference between individual parts of the underground equipment which are in contact with media differing in physicochemical composition, but also by the change in sign of the current at the anode portions, with a transformation of the anodes of multi-electrode corrosive elements into cathodes. In heterogeneous soil, the distribution of potential along the protected equipment will be non-uniform in character. Electrochemical protection does not exert its protective effect on the equipment as the result of an equilibration of the potential over its entire surface, but as a result of a decrease in the potential difference between micro-

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L 20713-65

ACCESSION NR: AR3010290

elements situated on the electrodes of the macroelement. Author's summary

SUB CODE: MM

ENCL: 00

Card 3/3

KOGAN, M. B.; MUGINOVA, I. L.

Some problems in exercise therapy in rheumatism in children.
Pediatria 41 no.3:45-48 '62. (MIRA 15:2)

1. Iz kafedry 1-y pediatrii (zav. - prof. N. A. Shalkov) Lenin-
gradskogo gosudarstvennogo instituta usovershenstvovaniya vrachey
imeni S. M. Kirova (dir. - dotsent A. Ye. Kiselev) i Detskoy
bol'nitsy imeni K. A. Raukhfusa (glavnyy vrach Ye. N. Speranskaya)

(EXERCISE THERAPY) (RHEUMATIC FEVER)

MUGINOVA, Ye.L., vrach lechebnoy fizkul'tury

Organization of special therapeutic groups in schools. Vop. okh.
mat. i det. 6 no.9:82-87 S '61. (MIRA 14:9)

1. Iz lechebnogo ob'yedineniya (glavnyy vrach Yu.S. Chistyakov)
bol'nitsy imeni K.A.Raukhfusa i 1-y kafedry bolezney (zav. - prof.
N.A.Shalkov) Gosudarstvennogo instituta usovershenstvovaniye
vrachey.

(EXERCISE THERAPY)

MUGINOVA, Ye.L.; SMIRNOVA, S.M.

Experience in the organization of minute exercise in schools
associated with the Rankhufus Pediatric Hospital. *Pediatrics*
39 no.12-6 '61. (MIRA 14:1)
(~~LENINGRAD~~-EXERCISE THERAPY)

MUGINSHTSEY, L.; TULUTOV, I.

Reducing documentation in certifying the replacement of a worn-out
tool. Bukhg. uchet 15 no.4:41-43 Ap '58. (MIRA 11:5)

1. Starshiye bukhgaltory Uralsmashzavoda.
(Tools) (Machinery industry--Accounting)

MUGICIU, Dumitru, ing., correspondent

Scientific studies. Constr Buc 17 no.783:1 9 Ja '65.

SHAVKUNOV, A.V., inzh.; AKSENOV, N.A., inzh.; MUGORMAN, Yu. N., inzh.;
KOLCHINSKIY, V.I., inzh.; Primali uchastiye: KORNEYEVA, M.P., inzh;
CHERNOV, V.I., inzh.; MARKAROV, S.Ye., inzh.; SAYMUKOVA, Ye.P., inzh;
LUKASH, B.K., starshiy master; TITOV, S.A., svarshchik; BEREZOVSKIY, V.A.

Welding titanium alloys in chambers with a controlled atmosphere.
Svar. proizv. no.4:24-25 Ap'61. (MIRA 14:3)
(Titanium alloys- Welding) (Protective atmospheres)

KORKUNOV, I.M.; KURBATOV, V.P.; MUGRUZIN, A.S.; SUEHARCHUK, G.D.;
ZAKHMATOVA, M.R., red.izd-va; KRASNAYA, A.K., tekhn.red.

[Socialist transformation of agriculture in the Chinese
People's Republic, 1949-1957] Sotsialisticheskoe preobra-
zovanie sel'skogo khoziaistva v Kitaiskoi Narodnoi Respubli-
ke, 1949-1957. 206 p. (MIRA 13:4)
(China--Agriculture)

INDEXED

RUMANIA/Atomic and Molecular Physics - Statistical Physics.
Thermodynamics

D-3

Abs Jour : Ref Zhur - Fizika, No 8, 1958, No 17723

Author : Mugur Mioara

Inst : Not Given

Title : Relaxation of Aggregates of Permanently Polarized Micro
Systems in a Strong External Field.

Orig Pub : Studii si cercetari fiz. Acad. RPR, 1957, 8, No 3, 311-319

Abstract : The relaxation equation for aggregates of permanently polarized
micro systems in a strong external field is written in the
form of a corresponding new model of the mechanism. The
model indicated can lead to new methods of experimentation in
the investigation of nuclear and microstructural character-
istics and can find application in the general theory of
irreversible processes.

Card : 1/1

MUGUR, M.

"The theory of nuclear magnetic resonance."

p. 171 (Studii Si Cercetari De Fizica) Vol. 8, no. 2, 1957
Bucharest, Rumania

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

MUGUR, MIOARA

RUMANIA/Physical Chemistry - Molecule, Chemical Bond.

B-4

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 23891

Author : Mugur Mioara

Inst : Rumanian Academy

Title : Theory of Nuclear Magnetic Resonance.

Orig Pub : Studii si cercetari fiz. Acad. RPR, 1957, 8, No 2, 171-213

Abstract : No abstract.

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urbation Hamiltonian H^1 (which contains the remaining elements of the dipole term and the exchange term). Also cal-

MUGUREVICS, E. (Riga)

Findings of objects made from pink schist in Latvia. Vestis Latv
ak no.9:17-32 '60. (EEAI:10:9)

1. Latvijas PSR Zinatnu akademijs, Vestures instituts.

(Latvia--Schists)

MUGUREVICS, E.

Numismatic material concerning the trade routes of Latvia in the 9th-13th centuries. Vestis Latv ak no.1:11-24 '61.

1. Latvijas PSR Zinatnu akademijas Vestures instituts.

~~MUGUREVICI, E.~~ [Mugurevics, E.]

Finds of Cypraea moneta in Latvia. Vestis Latv ak no.7:37-52 '62.

1. Institut istorii AN Latviyskoy SSR.

KOTLYAR, D.K.; MUGUYEV, G.D.; MELEZHIK, V.P.

In the State Committee of the Council of Ministers of the
Ukrainian S.S.R. for the coordination of scientific research.
Mat. i gornorud. prom. no.3:83-85 My-Je '65. (MIRA 18:11)

BALON, I.D., kandidat tekhnicheskikh nauk; KOTOV, I.K., inzhener; KUGUYEV,
G.D., inzhener.

Experience in operating increased-pressure blast-furnaces. Stal' 15
no.1:23-31 Ja '55. (MIRA 8:5)
(Blast-furnaces)

M. GUYEV, G. D.

Best practice with the use of Krivoi Rog sinter
 sinter, Ya. P. Kulikov, Ya. S. Gorbanev, *Met. Ind. Zhdanov*, *Met. Ind.* 1967. — A detn. of the effect of basicity increase of sinter from 0.85 to 1.2 and charge in the amt. of 55-60% indicated that with a basicity of 1.0-1.2 the coke rate can be increased by 8% in the sinter, use of lime. The sintering temp., blast humidity, and pct of lime stone added, blast temp., blast humidity, and pct of lime stone added, blast temp. Lowering free CaO content from 2.5 to 1.35% by grinding limestone to 10% under 6 mm, led to a high-sintering temp., a high-FeO content, and lower reducibility, thus leaving the optimum grinding size for limestone undecided. Fluxed sinter is more dense and offers a higher resistance to the blast; it is more friable, resulting in 24% of fines in place of the usual 18% so that sizing is beneficial. A partial replacement of CaO with MgO does not strengthen the sinter or increase its production. Its use is not recommended when the sinter is used in combination with ores having an easily fusible gang, but is advantageous when the gang is refractory. The use of MgO always calls for a hot-working furnace.

PL
MT

MUGUYEV, G.D., insh.

New sintering machine [from "British Steelmaker," no. 7, 1961].
Met. i gornorud. prom. no.1:85-86 Ja-F '62. (MIRA 16:6)

(Sintering—Equipment and supplies)

MUGUYEV, G.D., inzh.; KOD'YEVA, Z.P. [translator]

Investigating the efficiency of using natural gas in the
blast furnace process [from "Coke and Gas," no.267, 1961].
Met. i gornorud. prom. no.2:35-86 Mr-Ap '62. (MIRA 15:11)
(United States—Blast furnaces)

MUGUYEV, G.D., inzh.; KOD'YEVA, Z.I. [translator]

Characteristics of blast furnace operations at high temperatures
of blow (up to 1100°C) (from "Blast Furnace and Steel Plant,"
no.6, 1961). Met. i gornorud. prom. no.3:91-92 My-Je '62.
(MIRA 15:9)

(United States--Blast furnaces)

MUGUYEV, G.D., inzh., referent; KOD'YEVAYA, Z.P. [translator]

Blast furnace smelting with use of a self-fluxing sinter
(from "Blast Furnace and Steel Plant," no. ~~2-1962~~).
Met. i gornorud. prom. no. 4:92-93 JI-Ag '62. (MIRA 15:9)
(Japan--Blast furnaces)

MUGUYEV, G.D., inzh., referent; KOD'YEVAYA, Z.P. [translator]

Programming blast furnace charge materials (from "Iron
Age," no.34, 1961; "Iron and Steel Engineer," no.9, 1961).
Met. i gornorud. prom. no.4:93-94 JI-Ag '62. (MIRA 15:9)
(United States---Blast furnaces)

MUGUYEV, G.D.

Operation of a blast furnace with a very small quantity of slag.
Met. i gornorud. prom. no. 2:84-86 Ir-Ap '64. (MIRA 17:9)

MUHA, Jozsef

For forty-seven years in the forefront of Hungary's sport;
introducing the Iron Workers' Sports Club. Munka 9 no.1:
28 Ja '59.

1. "Nepzabadsag" rovatvezetoje.

MUHALLYFI, P.

Computation method for determining the profitable degree of tooling. I. (To be contd.)

P. 272. (GEP.) (Budapest, Hungary) Vol. 9, No. 7/8, Oct./Nov. 1957

SO: Monthly Index of East European Accession (E AI) LC. Vol. 7, No. 5, 1958

MUHAMED, Teftedarija, d-r; LJUBA, Knezevic, d-r

Contribution to hormonal and antibiotic therapy of typhoid.
Med arh., Sarajevo 14 no.1:115-130 Ja-F '60.

1. Infektivna klinika Medicinskog fakulte a u Sarajevu, sef:
prof. d-r Blagoje Dordevic.
(TYPHOID ther.)
(CHLORAMPHENICOL. ther.)
(CORTICOTROPIN ther.)
(CORTISONE ther.)

MUHARI, Istvan (HG 5 KBP)

The visit of UP 2 ABA to Budapest. Radiotechnika 13 no.2:54
F '63.

YUGOSLAVIA

A. MUHEK, Federal Atomic Energy Commission (savezna komisija za nuklearnu energiju) Belgrade.

Current Problems of Radiation Hygiene in Yugoslavia."

Belgrade, Higijena, Vol 14, No 2-3-4, 1962: pp 169-174.

... general discussion of the problems and dangers posed by the uncontrolled expansion of industrial use of radioactive materials; in Yugoslavia the authorities and responsibilities in this area are concentrated and centralized which has advantages; however, many difficulties remain; the legislative and regulatory measures in effect or planned are briefly described.

1/1

* MUHEK-SIMUNEK, J.

HUDOLIN, Vl., Dr.; MUHEK-SIMUNEK, J.; BREITENFELD, J., dr.

Psychiatry and clinical psychology. Lijec. vjes. 70 no.11-12:
513-518 Nov-Dec 56.

1. Iz Neuroloski-psihijatrijskog odjela Opce bolnice dr.
M. Stojanovica u Zagrebu.

(PSYCHIATRY,

relation to clin. psychol. (Ser))

(PSYCHOLOGY

relation to psychiatry of clin. psychol. (Ser))

MUHITS, K.
COUNTRY : HUNGARY H
CATEGORY : Chemical Technology. Chemical Products and
Their Applications. Water Treatment. Sewage.
ABS. JOUR. : RZKhim., No. 23 1959, No. 82897
AUTHOR : Marth, J.; Muhits, K.; Pato, T.; Parnay, Z.
TITLE : Purification of City Effluent Waters With
Activated Clay
ORIG. PUB. : Evuletrepszet, 1958, 7, No 5-6, 239-244
ABSTRACT : A review of modern achievements.

CARD:

1/1

MUHITS, K.; PATO, T.

"Study of the equipment of the first Hungarian activated-sludge plant operated with surface aeration." p. 140.

HIDROLOGIAI KÖZLEMÉNY. HYDROLOGICAL JOURNAL. (Magyar Hidrológiai Társaság).
Budapest, Hungary, Vol. 39, No. 2, Apr. 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 9, No. 8, August
1959.
Uncla.

MUHLBACHER, W.

Apparatus for drawing yarns through the weaver's reed. p. 5.
(TEHNICA NOUA. RUMANIA. Vol. 3, no. 57, July 1956.)

SO: Monthly List of East European Accessions (EEAL) LG, Vol. 6, no. 7, July 1957. Uncl.

WENKE, M.; WENKEOVA, J.; SKROBAL, D.; MUHLBACHOVA, E.

The action of glucose on protamine hyperlipaemia. Rev. Czech. M. 4 no.1:
12-19 1958.

1. Pharmacological Institute of the Medical Faculty, Charles University,
Prague. Director: Dr. M. Wenke, Institute for Human Nutrition, Prague.
Director: Doc. J. Masak.

(LIPIDS, in blood
hyperlipemia induced by protamine sulfate, eff. of glucose
in rats)

(PROTAMINES, eff.
same)

(GLUCOSE, eff.
on hyperlipemia induced by protamine sulfate in rats)

WENKE, M.; MUHLBACHOVA, E.; HYNIE, S.

On the problem of detoxication of antibiotics by means of certain sulfonated polysaccharides. Cesk.fysiol. 9 no.3:306-307 My '60.

1. Farmakologicky ustav fak. vseob.lek. KU, Praha.
(ANTIBIOTICS chem)
(SULFONES chem)
(POLYSACCHARIDES chem)

WENKE, M.; MUELBACHOVA, E.; HYNIE, S.

Effect of adrenalin on depot lipids. Cesk.fysiol. 9 no.3:307 My '60.

1. Farmakologicky ustav fak. veseob.lek. KU, Praha.
(LIPIDS metab)
(EPINEPHRINE pharmacol)

WENKE, M.; MUHLBACHOVA, E.; HYNIE, S.; DOLEJSOVA, K.

Metabolic effects of catecholamines. *Physiol. bohemoslov.* 12 no.1:
43-50 '63.

1. Department of Pharmacology, Faculty of General Medicine, Charles
University, Prague.

(NOREPINEPHRIN)	(PHENTOLAMINE)	(LIPID METABOLISM)
(BLOOD PRESSURE)	(BLOOD FLOW VELOCITY)	(FATTY ACIDS)

2

JINDŘ NEJEDLIK

MAREŠKOVÁ, E., MD; HENIE, S., MD; WENGEROVA, J., MD.

Pharmacological Institute of the Faculty of Medicine,
Medicine of KU (Farmakologický ústav Fakulty všeobecného
lékarství KU), Prague (for all)

Prague, Praktický lékař, No 13, 1963, p 754

"Experimental Studies of the Metabolism of Lipids II.
Relation to Atherosclerosis."

DOCZY, P., prof.; MUHLE-ALDEA, Maria, dr.

Hemorrhagic cutaneous necrosis, a grave complication of dicoumarin therapy. Med. intern. (Bucur.) 16 no.8:977-982 Ag '64.

1. Lucrare efectuata in clinica I medicala, Institutul medico-farmaceutic, Tirgu Mures.

L 13233-66

ACC NR: AP6006033

SOURCE CODE: CZ/0053/65/014/004/0290/0290

AUTHOR: Cernohorsky, M.; Schusterova, D.; Cepelik, J.; Muhibachova, E. 27

ORG: Faculty of General Medicine, Institute of Pharmacology, Charles University, Prague (Farmakologicky ustav fak. vseob. lek. KU) B

TITLE: Properties of some catechol sympathomimetic drugs on lipid mobilization in vitro [This paper was presented during the Twelfth Pharmacologic Days, Saolenice, 27 Jan 65.]

SOURCE: Ceskoslovenska fysiologie, v. 14, no. 4, 1965, 290

TOPIC TAGS: nervous system drug, drug effect, pharmacology

ABSTRACT: Effect on nonesterified fatty acid concentration in fatty tissue in vitro of addition of 8 simple aliphatic catecholamine derivatives of norepinephrine; while alpha and beta adrenergic effect differs widely, lipomobilising effect differed only mildly in these catecholamine analogs. The authors thank Dr. Engelhardt and Dr. Moed for making the materials available for use. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 06 / SUBM DATE: none / OTH REF: 004

Handwritten signature

L 13251-66

ACC NR: AP6006039

SOURCE CODE: CZ/0053/65/014/004/0292/0293

AUTHOR: Elisova, K.; Hynie, S.; Wenke, M.; Muhlbachova, E. 27B

ORG: Faculty of General Medicine, Institute of Pharmacology, Charles University, Prague (Farmakologicky ustav fak. vseob. lek. KU)

TITLE: Effect of isoxsuprine on glycid metabolism [This paper was presented during the Twelfth Pharmacologic Days, Smolenice, 27 Jan 65.]

SOURCE: Ceskoslovenska fysiologie, v. 14, no. 4, 1965, 292-293

TOPIC TAGS: pharmacology, drug effect, biologic metabolism, carbohydrate

ABSTRACT: In vitro (sections of diaphragm muscle) study with levorotatory and racemic isoxsuprine, isoprinalid and Nethalid indicates that isoxsuprine has a glycogenolytic effect independent of its beta-mimetic adrenergic properties. The authors thank Dr. Koch for placing the isoxsuprine at their disposal. Orig. art. has: 1 figure. JPRS

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 001

Card 1/1 *[Handwritten signature]*

L 13586-66

SOURCE CODE: CZ/0053/65/014/004/0306/0306

ACC NR: AP6006067

AUTHOR: Muhlachova, E.; Schusterova, D.; Misskova, D.; Elisova, K.

28 B

ORG: Institute of Pharmacology, Faculty of General Medicine, Charles University, Prague (Farmakologicky ustav Yak. vseob. lek. KU)

TITLE: Indirectly acting sympatotropic substances in lipid metabolism [This paper was presented during the Twelfth Pharmacologic Days, Smolenice, 26-29 Jan 65.]

SOURCE: Ceskoslovenska fysiologie, v. 14, no. 4, 1965, 306

TOPIC TAGS: biologic metabolism, pharmacology, drug effect, nervous system drug

ABSTRACT: Study of effect of ephedrine, amphetamine and tyramine on the epididymal fatty tissue metabolism in vitro reveals that the "sympatolytic" effect is dose-dependent. Ephedrine even competitively antagonized the norepinephrine lipo-mobilization. Guanethidine, bretylium and phentolamine were used in the study. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 06 / SUM DATE: none / ORIG REF: 002

HW

DOCZY, P.; MUHLE-ALDEA, Maria

Haemorrhagic cutaneous necrosis, a severe complication of
dicoumarinotherapy. Rumanian med. rev. 19 no.1:29-34 Ap-Je'65.

MUELISEN, E.

MUELISEN, E. Concrete road construction with technical details in our country
and abroad. p. 101.

Vol. 1, No. 8/9, Aug./Sept. 1956.

CESTE I PROMET
TEHNOLOGIJA

Zagreb, Yugoslavia

So: East European Accession, Vol. 6, No. 2, February 1957

MÜHLEISEN, Jerzy, mgr inż.

Losses of electric power and the costs of its production
and distribution. Energetyka Pol 17 no.3:Suppl: Energopomiar
9 no.2:85-88 Mr '63.

29711

S/169/61/000/008/026/053

A006/A101

3.5150

AUTHOR: Mühleisen, R.

TITLE: Electric fields underneath thunderstorm clouds

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 8, 1961, 34, abstract 8B250
(V sb. "XI General'n. Assambleya Mezhdunar. geod. i geofiz. soyuza, 1957", Moscow, AN SSSR, 1959, 133)

TEXT: At a ground station, measurements were made of electric fields, air streams, point discharge currents, precipitations, charges of individual drops, and the density of free charges. Assuming plausibly that the air contains nuclei among other particles, the distribution of the field from the earth to the ceiling of the cloud can be calculated. It can be asserted that immediately before the flashing of lightning, the electric field on the earth becomes considerably weaker due to the electric spatial charge which is predetermined by point discharges. This explains the fact that the lightning strikes sometimes near elevated objects. Electric spatial charge is concentrated on the lee of elevated objects. The hypothesis can be advanced that the lightning discharges occur more frequently from the lee of the high objects. X

The author's summary

[Abstracter's note: Complete translation]

Card 1/1

MOHARAD, A.

✓ Chemical properties and active group of rhodanese and the mechanism of rhodanese action. *B. Fehér, I. Fodor, S. Zeyerka, and A. Moharad (Közvető Loránd Utcai, Budapest). Acta Physico-Chim. Hung. 7, 175-8 (1963) (in English).*—Rhodanese (I) was purified 200-fold from beef liver. The ability of $Zn(OH)_2$ to ppt. the I activity was used to demonstrate that $Na_2S_2O_8$ or O oxidized the enzyme to its disulfide form, and that ascorbic acid (palladium catalyst), and H_2S reduced the disulfide linkage of the enzyme. The proposed mechanism involved the following: $RSSR + NaCN \rightarrow RSNa + RSCN$; $2RSNa + Na_2S_2O_8 \rightarrow RSSR + Na_2S + Na_2SO_4$; $RSSR + Na_2S \rightarrow RSSNa + RSNa$; $RSSNa + NaCN \rightarrow RSNa + NaSCN$.

Only the first reaction was specific for the catalytic synthesis of thiocyanate.

3

COUNTRY : HUNGARY Q
CATEGORY : Farm Animals. General Problems
ABS. JOUR. : RZBiol., No. 13, 1958, No. 59475
AUTHOR : Tangl, H.; Muhlrad, A.
INST. : -
TITLE : Changes Occurring During the Process of
Steaming Feeds
ORIG. PUB. : Allattenyeszte, 1956, 5, No 4, 289-297
ABSTRACT : Glucokinins which are formed during the steaming of pelleted corn or barley, as well as in the mixtures of silage, beet chips, and various pelleted grains, were tested by means of a subcutaneous injection of the extract and by feeding steamed fodder to animals. Swine showed a greater appetite, ate a greater amount of the feed, and better repaid the feeding cost. With two-day-long steaming of

CARD: 1/2

Q - 9

HUNGARY/Farm Animals - Large Horned Cattle.

Q-2

Abstr Jour : Ref Zhur - Biol., No 18, 1958, 83343

Author : Kallai, Laszlo; Zoldy, Miklos; Muhlrad, Andras; Bernus, Janos; Kovacs, Jozsef

Inst : -

Title : Using Girasole (*Helianthus tuberosus* L.) as Fodder.
2. Relative Value of Girasole in Feeding of Milch Cows.

Orig Pub : Allattenyesztes, 1956, 5, No 4, 299-309

Abstract : In a test group, cows were fed 12-15 kg of girasole (G) instead of fodder beets of the same nutritional value. In this group milk yields surpassed the milk yields of control cows by 4.7 percent. In tests with 8 cows a 2.6 percent milk yield increase was achieved when 2 kg of dried pulp replaced 5 kg of G and 0.5 kg of extracted sunflower shreds. The milk fat content did not change. A hypothesis is advanced according to which inulin which is contained in G assists in activating the intestinal microflora, and

Card 1/2

HUNGARY / Farm Animals. General Problems.

Q-1

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 45141

Author : Muhlrad, Andras

Inst : Not given

Title : The Study of Digestion in the Rumen of Ruminants. 1. The Study of the Depression of the Digestion of Cellulose by Starch with the Aid of the Artificial Ruman.

Orig Pub : Allattenyesztes, 1956, 5, No. 4, 351-358

Abstract : The methods of studying the activity of the microorganisms of the rumen, and a technique of the use of "artificial" rumen, are described. It was established that carbamide is utilized by the bacteria of rumen for building up the protein of their body. The depression of the digestion of cellulose by starch is stopped when alfalfa hay is being fed.

Card 1/1

HUNGARY / Farm Animals. General Problems. Q

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 7283

Author : Kellai, Laszlo; Muhlrad, Andras; Zoldy, Miklos;
Kovacs, Jozsef; Bernas, Janos

Inst : Not given

Title : The American Artichoke (*Melianthus tuberosus*
L.) as a Feeding Agent. 3. The Effect of the
Carbohydrates of Artichoke Tubers on the in
vitro Function of Intestinal Microorganisms

Orig Pub : Allattenyesztes, 1957, 6, No 2, 169-176

Abstract : As a result of biochemical investigations in
which the method of an "artificial rumen"
was applied, the authors established that the
carbohydrates of the American artichoke (inu-
lin and fructose) influence the vital acti-
vity of the microorganisms of the rumen more

Card 1/2

COUNTRY : HUNGARY
CATEGORY : Farm Animals. Q
 : Cattle.
ABS. JOUR. : AZhBiol., No. 6, 1959, No. 25850
AUTHOR : Tangl, Harald; Czako, Jozsef; ~~Muehlrad~~, Andras
INST. : -
TITLE : Experiments Pertaining to the Application of
 : Syntestrin for Improving the Fattening of
 : Cattle.
ORIG. PUB. : Allattenyesztes, 1957, 6, No 4, 265-272
ABSTRACT : Fifteen to 20 mg of syntestrin (acts as an
 : ovary hormone, estrone) were added to the fod-
 : der of each animal (a total of 253 heads) daily
 : in the form of a capsule. During the course of
 : the 66 days of the experiment, the animals of
 : the experimental group manifested a 14.2 kg
 : larger weight gain in comparison to the control
 : group. In studies arranged according to sex,
 : the largest weight gain of 25.3 kg was observed
 : in bulls, whereas in cows it amounted to only
 : 21 kg.
CARD: 1/1

42

BIBO, H.A.; ~~MUHLRAD, A.~~

Studies on the functional role of the myofibril-bound nucleotids.
I. Phosphorylation of the myofibril-bound nucleotide. Acta physiol.
hung. 18 no.2:85-93 '60.

1. Department of Biochemistry, Institute of Phylogeny and Genetics.
L. Eotvos University, Budapest.
(NUCLEOSIDES AND NUCLEOTIDES metab)
(MUSCLES metab)

BIRO, N.A., MUHLRAD, A.

Studies on the functional role of the myofibril-bound nucleotide.
II. Investigations on the metabolism of bound phosphate fractions
by the use of labelled P. Acta physiol.hung. 18 no.2:95-101 '60.

1. Department of Biochemistry, Institute of Phylogeny and Genetics,
L. Eotvos University, Budapest.
(NUCLEOSIDES AND NUCLEOTIDES metab)
(MUSCLES metab)
(PHOSPHATES metab)

BIRO, N.A.; MÜHLRAD, A.; DOBRONAI, P.

A simple and sensitive method for the estimation of inorganic phosphorus. *Acta physiol. hung.* 18 no.4:247-252 '61.

1. Institute of Phylogeny and Genetics, Biochemistry Group, L. Eotvos University, Budapest, and Richter Pharmaceutical Works, Budapest.

(PHOSPHORUS chem)

BIRO, N. A.; MÜHLRAD, A.

The binding of ca by isolated myofibrils. Acta physiol. hung. 18
no.4:275-278 '61.

1. Institute of Phylogeny and Genetics, Biochemistry Group, L. Eotvos
University, Budapest.

(CALCIUM metab) (MUSCLES metab)

MUHLRAD, Andras; DENES, Jossef

Protein synthesis and its aspects from the point of view of information theory. Biol kozl 10 no.2:97-109 '62.

1. Eotvos Lorand Tudományegyetem Szarmazas- es Oraklestani Intezet Biokemiai csoportja, Budapest.

*

BIRO, N. A.; MUHLRAD, A.; GOBEL, Vera; JAKY, Susanne

Inhibition of myofibrillar ATPase activity by adenosine monophosphate.
Acta physiol. akad. sci. hung. 21 no.1:1-8 '62.

1. Biochemistry Group, Institute of Phylogeny and Genetics, Eotvos
Lorand University, Budapest.

(MUSCLES metabolism)
(ADENOSINE PHOSPHATES pharmacology)
(ADENYLPYROPHOSPHATASE antagonists)

BIRO, N. A.; MUHLRAD, A.; GOBEL, Vera; JAKY, Susanne

On the mechanism of substrate inhibition of myofibrillar ATPase.
Acta physiol. akad. sci. hung. 21 no.1:9-13 '62.

1. Biochemistry Group, Institute of Phylogeny and Genetics, Eotvos
Lorand University, Budapest.

(MUSCLES metabolism)
(ADENYLPYROPHOSPHATASE antagonists)

MUHLRAD, A.; BIRO, N. A.; VERTES, K.

Binding of Ca and Mg by functional structural proteins of muscle.
Acta physiol. akad. sci. hung. 21 no.1:15-28 '62.

1. Biochemistry Group, Institute of Phylogeny and Genetics, Eotvos
Lorand University, Budapest.

(MUSCLE PROTEINS chemistry) (CALCIUM chemistry)
(MAGNESIUM chemistry)

HUNGARY

MUHLRAD, Andras, JAKY, Eszszanna, and BIRO, Endre, of the Institute for Phylogenics and Genetics at Eotvos Lorand University (Eotvos Lorand Tudomanyegyetem Szaramazas- es Oroklestani Intezete) in Budapest.

"The Independence from the Presence of Relaxing Factors of the Substrate Inhibition in Myofibrillar ATPase"

Budapest, Acta Physiologica Academiae Scientiarum Hungaricae, Vol 23, No 2, 1963, pp. 101-104.

Abstract: [English article; authors' English summary] The characteristics of the substrate inhibition of myofibrillar ATPase (the dependence of activity from ATP and Ca concentration) are not influenced by excessive washing of the myofibrils. Furthermore, treatment with deoxycholate and thymol destroys the activity of relaxing granules. The substrate inhibition is according to this property of actomyosin and is not induced by the relaxing factor remaining in the myofibril. Nine references, including 1 Hungarian and 8 Western.

1/1

MEYER, A.; KLETZ, Gy.; BIRÓ, N.A.

Effect of myofibrillar ATP-ase. *Acta Physiol.*
Hung. Acad. Sci. 1964, 164

EDTA inhibition of myofibrillar ATP-ase. *Ibid.* 325-332

1. Biochemistry Group, Institute of Phylogeny and Genetics,
Eötvös Loránd University, Budapest.

MUHLRAD, A.; BALINT, M.; E.R., N.A.

Uptake of labelled inorganic phosphorus by myofibrils: a study.
Acta physiol. Acad. sci. Hung. 26 no.4:339-350 '64

1. Biochemistry Group, Institute of Phylogeny and Zoology,
Eotvos Lorand University, Budapest.

Mühlrad, E

3518. Conductimetric titrations by the use of direct current. J. Dévay and E. Mühlrad (Börzs Loránd Sci. Univ., Budapest). Magyar Kém. Foly.

2

1958, 63 (5), 163-165 -- The current from a 110 or 120-V d.c. source passes through a 150,000 to 300,000-ohm resistance to the primary electrodes, consisting of smooth wheels of platinum. The secondary electrodes, situated between the primary ones, are silver-silver chloride connected to a valve voltmeter. The 0.5-1 to 1.0 mA is passed only while readings are being taken. The final readings on the instrument should be ≈ 200 mV. The soln is mechanically stirred. The best results are obtained when 98 to 99 per cent of the p.d. across the source is taken up by the resistance and there is no visible evolution of gas on the platinum electrodes. The distance between the secondary electrodes should be as great as possible; all the electrodes can be moved along a rail. With 0.1 N soln., the method is suitable for the titration of NaOH with HCl and of various sulphates with Ba⁺⁺. On the 0.01 N scale, a 400-V source is needed; for concn. of about 0.2 to 2 N, a special titrating vessel is used.

Chem

A. G. PRTO

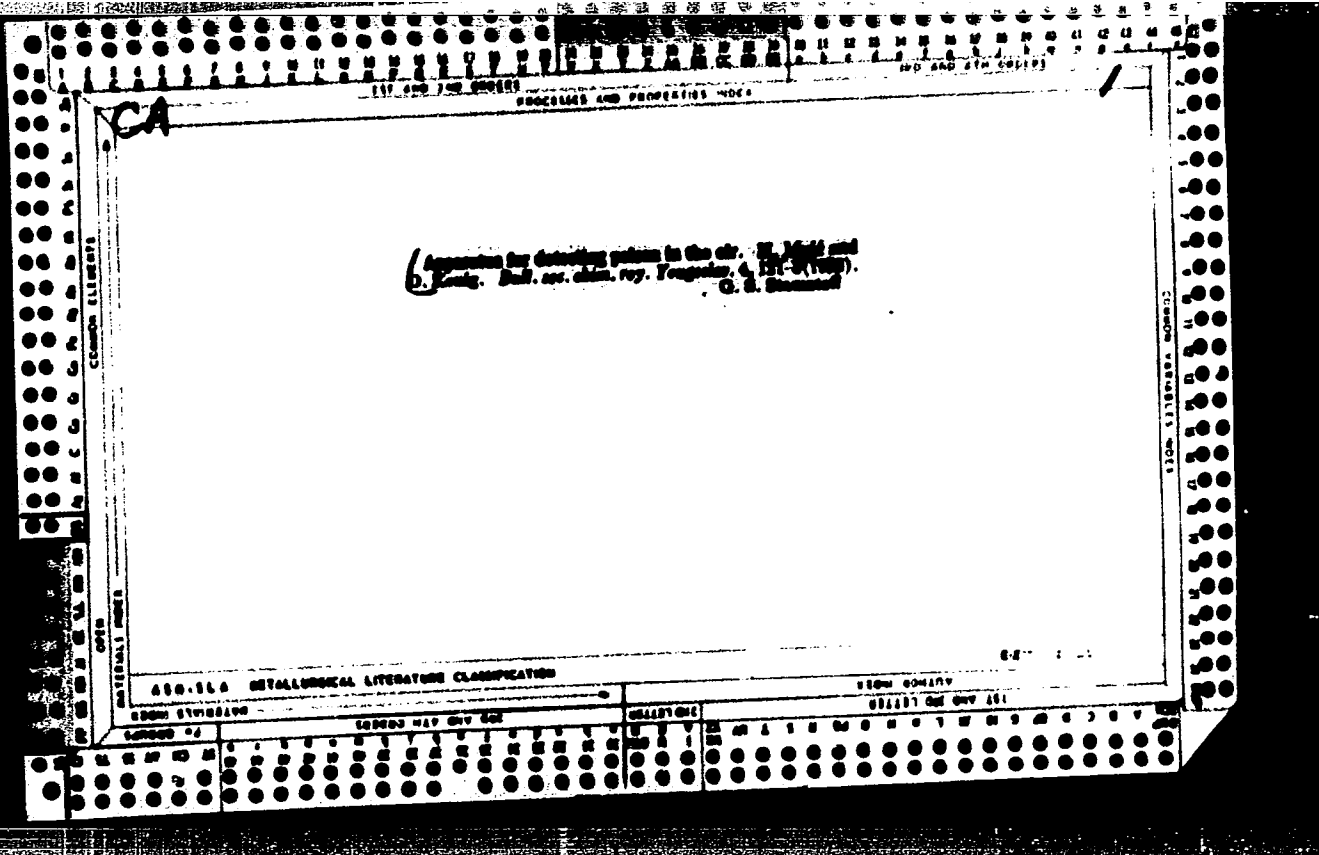
MUHLSTEIN, Miloslav; KARBAN, Otakar

Chronic suppurative exacerbated parotitis in 2 girls. Cesk. pediat.
17 no.7/8:738-741 Ag '62.

1. Detske oddeleni nemocnice v Opocne, prednosta MUDr. O. Karban.
(PAROTITIS)

JUNCAN, N.; ILLE, V.; COCOVES, C.; MUHSAM, H.; ILLE, G.

~~Critical~~ unitary tension and coefficients of skin-drying on
~~metallic~~ bars, rolled I profile, working in centric compression.
Bul stiint polit Gluj no.5:157-169 '62.



MUIC, N.

MUIC, N.

Yugoslavia (430)

Technology

The azo compounds of pyrroles and phenyl arsonic acids, p. 92, ARHIV ZA KEMIJU, Vol 20, No 1-4, 1948.

East European Accessions List, Library of Congress, Vol 1, No 14, Dec 1952.

UNCLASSIFIED

Bv abs.

Q11-6 Heterocyclic

Annals compound of 4-amino-2-hydroxy-3-methylpyridine
Journal of the American Chemical Society, 61, 2748 (1939); *J. Biol. Chem.*, 128, 174 (1940); *J. Am. Chem. Soc.*, 62, 2207 (1940). — Discussion of Semicarbazide-*hydroxyphenylhydrazine* acid (4.00 g.) and coupling with 2-hydroxy-3-methylpyridine (2.4 g.) gives 4'-amino-2-hydroxy-3-methylpyridine, $C_{10}H_{10}O_2N_2$.

decomp. at 188° without melting. These new arambromanes are synthesized by the reduction of arambromopyridine (1.38 g.) with H_2 over Pt at 100° in a current of H_2 and HI as catalyst. Thus are obtained 4 : 4'-di(β'-hydroxy-β'-carboxy-β'-methylpyridin-4'-yl)arambromane, $C_{20}H_{20}O_4N_4$, decomp. at 200° without melting; 2 : 2'-dihydroxy-4 : 4'- $C_{20}H_{20}O_4N_4$, decomp. at 200° without melting, and 4 : 4'-dihydroxy-2 : 2'-di(β'-hydroxy-β'-carboxy-β'-methylpyridin-4'-yl)arambromane, $C_{20}H_{20}O_6N_4$, decomp. at 210° without melting. S. S. MULLIC.

PHENYDICHLORARSINE

2

YUGO .

(Phenydichlorarsine (D.C.M.). Nikola Matic. *Lifol*
 1949. *Viernik* 71. 310-12(1949). 3-Amino-4-hydroxy-
 phenyldichlorarsine, abbreviated as phenyldichlorarsine
 is an antitumor which is prepd. through the following se-
 quence: 4-aminodibenzarsinic acid (I) is acetylated, then
 nitrated to 3-nitro-4-aminodibenzarsinic acid (II), hy-
 drolyzed with base to the 4-hydroxy analog (III), and re-
 duced to 3-amino-4-hydroxydibenzarsinic acid (IV). This
 with HI and SO₂ gives 3-amino-4-hydroxyphenyldichlorarsine
 and chlorinated to 3-amino-4-hydroxyphenyldichlorarsine-
 dichloride (VI). Therapeutic properties of VI are dis-
 cussed and compared to standard antitumorics and the fol-
 lowing conclusions are drawn: the drug is a crystal. sub-
 stance with well defined properties of chemical compds.,
 higher chemotherapeutic action is achieved with a small
 amount of As and oxidation of the material does not in-
 crease the toxicity as it is with the arsenobenzene.
 V. Mihajlov

Handwritten initials and marks.

Derivatives of pyrrolisobenzoxazinone acids. N-Methyl- and D. Piel (Phila Pharm. Co., Zagreb). *Arbin* (C.A. 57, 182-5(1950) (English summary); cf. C.A. 63, 832a). The synthesis is essentially the same as previously described. 2,4-Dimethyl-3,5-carbathoxypyrrrole (I) was prep'd. by the method of Koser. I was saponified in 10% KOH, and converted to 2,4-dimethyl-3-carbathoxy-5-pyrrolisobenzoxazinone acid (II) by the method of Koster, *et al.* (C.A. 16, 3085). Decarboxylation of II by dry distn. gave 2,4-dimethyl-3-carbathoxypyrrrole (III). I was also treated with conc'd. H₂SO₄ by the method of Fischer and Waldsch (C.A. 28, 1037) to give 2,4-dimethyl-3-carbathoxy-3-pyrrolisobenzoxazinone acid, which was decarboxylated by heating at atm. pressure to 2,4-dimethyl-3-carbathoxypyrrrole (IV). Attempts to couple diazotized 3,5-H₂N(O₂C)C₆H₃(CO₂H)₂ and III were not successful; a resinous product, which could not be purified, was obtained, and III was isolated from the reaction mixture. Attempts to couple a salt of diazotized 2,4-H₂N(O₂C)C₆H₃AcO₂H (V) with IV were also unsuccessful. 2,4-H₂N(O₂C)C₆H₃AcO₂H (4.34 g.) in 50 cc. H₂O contg. 1.03 cc. conc'd. H₂SO₄ was diazotized with 21 cc. N NaNO₂ at 0-5° and the product filtered into 3.34 g. III in 20 cc. abs. EtOH. 4-(3-Carboxy-2,4-dimethyl-5-pyrrolisobenzoxazinone acid (VI) pptd. as an orange-yellow powder. VI was filtered, rinsed with water, dissolved in aq. NaOH, and the soln. clarified with active C; acidification with dil. HCl gave 4.3 g. VI, orange-yellow microcrystals, decomp. 210°, slightly sol. in water, somewhat more sol. in dioxane; crys. from dioxane gave well-formed needles. VI was pptd. from aq. soln. with dil. acids. VI was stable in air under light. V (4.66 g.) in 70 cc. H₂O contg. 5.8 cc. conc'd. H₂SO₄ was diazotized as above and the product filtered into 3.34 g. III in 20 cc. abs. EtOH. 3-(1-Carbathoxy-2,4-dimethyl-5-pyrrolisobenzoxazinone acid (VII) pptd. and added. amt. of VII obtained on dial. with H₂O. VII was then dissolved in N NaOH, the soln. clarified with active C, added to 0.1 N HCl with const. stirring, and the ppt. was filtered, washed with H₂O, dried, and recryst. twice from dioxane to yield 7.3 g. VII, yellow needles, decomp. 100°. VII was stable in air under light. (p-H₂N)C₆H₄CO₂H (1.46 g.) in 20 cc. H₂O contg. 3.7 cc. conc'd. HCl was diazotized as above with 10 cc. N NaNO₂ and the soln. added dropwise at 5° or lower to 1.67 g. III in 70 cc. EtOH contg. 5 g. NaOAc. The mixture dissolved in a small vol. of H₂O, on yield 6-Ez 3,3'-[arimidyl(p-phenylene)]bis[2,6-dimethyl-3-pyrrolisobenzoxazinone] (VIII). VIII was filtered, washed with cold H₂O, dried in vacuo, and recrystd. from dioxane and then from ether to yield 1 g. VIII, dark orange microcrystals, m. 131° (decolor.). VIII was sol. in EtOH, dioxane, and CHCl₃. p-H₂N)C₆H₄CO₂H (2.17 g.) in 25 cc. H₂O contg. 0.81 cc. conc'd. H₂SO₄ was diazotized with 10 cc. N NaNO₂ and the product filtered into 1.67 g. IV in 20 cc. abs. EtOH; when the soln. was clear 15 g. NaOAc in a small amt. of H₂O was added with cooling, and after 1 hr. 4.1 H₂O was added to ppt. 4-(3-carbathoxy-2,4-dimethyl-5-pyrrolisobenzoxazinone acid (IX), yellow-orange powder. IX was twice dissolved in alkali and reprecip. by dil. HCl, washed with water, and dried in vacuo to yield 1.2 g. IX, decomp. 100°, m. 183° (decolor.). IX was sol. in EtOH and dioxane, and stable in air under light.

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60

M.U.C., N.

Chemical Abstr

116 N

The composition of the snake venom of *Vipera ammodytes*.
N. Mulić and M. Piantanila (Yugoslav Acad. Sci. Arts,
Zagreb). *Congr. intern. biochim., Résumés communs.* 3^e (1952)
Congr., Paris 1952, 390-400 (in English).—Adsorption of
proteins on filter paper is discussed (cf. *C.A.* 48, 225e,
7201b). W. C. Tobie

(1)

muic, Nikola

YUGO.

The properties of the toxin of *Vipera ammodytes*. Nikola
Mujic and Milko Plavšić. *Bull. intern. acad. yougoslave
sc. et beaux-arts (N.S.)* Livre 9, Classe sci. med., Livre 3,
159-66(1953) (in English).—See C.A. 48, 7201b.

N. Plavšić

MS 227

ADJUKOVIC, D.; MUIC, N.

Double diffusion analysis of the *Vipera ammodytes* A. venom.
Arh. hig. rada 14 no.2:107-110 '63.

1. "Andrija Stampar" School of Public Health, Faculty of Medicine,
University of Zagreb, Yugoslavia.

MUIC, N.; PIANTANIDA, M.

The properties of Vipera ammodytes venom. Rad Jugosl. akad. znan., odjel med. 3:207-220 1953.

1. Iz Instituta za medicinska istrazivanja Jugoslavenske akademije znanosti i umjetnosti i umjetnosti.

(VENOMS,

Vipera ammodytes venom, chem. properties (Ser))

MUIĆ, N.

Properties of the toxin of *Vipera ammodytes*. M. Plan-
tanida and N. Muić (Yugoslav. Acad., Zagreb). *Radovi*
Jugoslav. Akad. Znanosti i Umjetnosti 298, 207-20 (1953);
cf. *C.A.* 48, 225e. —Ultraviolet absorption spectra are
given of a 0.1% soln. of the toxin after centrifuging and
filtering through a Jena G4 filter, a Whatman no. 1 paper,
and a Seitz filter. These spectra, made after each filtration,
show distinguishable extinction maxima. After filtering
through a Seitz filter no. 1911 the soln. was only slightly
toxic and without hemolytic activity. The water-insol.
part of the toxin was 1/3 as hemolytic but equally toxic as
the original toxin. By means of paper strip chromato-
grams 7 protein fractions were isolated from the toxin, and
investigated by a microelectrophoretic paper method.
Two of the proteins had isoelectric points above pI 8.9, the
other being acidic.

S. Plančić

MUIĆ, N.

Phosphatidase A activity of Ammodytes viper venom. N. Muić and A. Meniga (Inst. med. Istraživanja, Jugoslav. Akad. Zagreb). *Arhiv hem.* 27, 131-0(1955)(in English); cf. *C.A.* 48, 7201b. -- By paper-strip electrophoresis 7 protein components were sepd. from the venom. The activity of phosphatidase A in the venom is due to one of the sepd. components, the position of which is given on the electrophogram presented. None of the sepd. components exhibits direct hemolytic activity. N. Phatidase

MD

①

MUIC, N.

Paper-stain chromatography of proteins. M. Plantanida, A. Menica, and N. Muic (Yugoslav Acad. Sci. Arts, Zagreb). *Arch. Biochem. and Biophys.* 57, 334-9 (1956); cf. *C.A.* 48, 225c.—The previous finding that proteins can be sep'd. chromatographically on paper strips by the use of buffer concn. gradients was confirmed. A distinctly different but characteristic migration rate in a Na citrate buffer gradient 1:1000 was demonstrated for protamine (*Mugil cephalus*), human γ -globulin, and bovine-serum albumin. The electrophoretically detected slight inhomogeneity of protamine could be confirmed by chromatography. The rate of migration increased with the acidity of the protein, but was not essentially affected by the pff of the buffer between pH 5.1 and 10.1. Albumin migrated to the front and accumulated in the spots; it also showed a marked tailing effect. The rate of migration increased with the concn., especially at high values; the increase is probably correlated with adsorption. The migration rate of the proteins in mixts. was approx. the same as for the separate substances. The new band which appeared for all mixts. contg. protamine and albumin was probably due to complex formation. Felix Saunders

②

MVIC, N

~~S.E.M.~~

✓ Venom of the sand viper. Electrophoretic and chemical characterization of the main fractions. N. Mucic and M. Plantanila (Inst. Med. Invest., Zagreb, Yugoslavia). Hoppe-Seyler's Z. physiol. Chem. 299, 6-14 (1956).—The proteins of the venom of Vipera ammodytes were sepd. by EtOH pptn. at the isoelec. point (pH 5.2-5.5). After hydrolysis, the amino acids were detd. by paper chromatography. By paper electrophoresis 6-7 components could be distinguished. The toxic principle was concd. 4 times in a still impure fraction. Erich Heftman

①

Mulić, N.

Immunochemical and biochemical properties of the *Bitis arietans* viper venom. N. Mulić (Inst. med. istraživanja, Jug. akad., Zagreb). *Bull. Ser. Conseil acad. R.P.F. Yougoslav.* 2, 105 (1956) (in English); cf. *C.A.* 50, 5810k. -- By means of free electrophoresis 7 protein components were distinguished in the venom, and earlier results were thus confirmed (*C.A.* 49, 4162f, 48, 7201b). Chromatographic analysis of the protein hydrolyzate showed the following amino acids: cystine, glycine, threonine, alanine, lysine, arginine, tyrosine, valine, proline, methionine, leucine, phenylalanine, and tryptophan. The addn. of EtOH to an aq. venom soln. at low temp. (1°), to a final EtOH concn. of 67%, gave an EtOH-sol. fraction, which had 4 times stronger neurotic effect when tested on mice, than the original venom. This fraction was not homogeneous electrophoretically, but evidently was the poisonous principle of the venom in its immature state.

N. Plavšić

muic, N

1937. Paper-strip chromatography of proteins. M. Plantanić,
A. Meniga, and N. Muic *Arch. Biochem. Biophys.* 1955, 57, 334-
339 (Div. of Immunol. and Chemotherapy, Inst. for Med. Res.,
Yugoslav Acad. of Sci. and Arts, Zagreb, Yugoslavia).—Mixtures
of protamine, γ -globulin and serum albumin were developed on
filter paper by citrate buffer of progressively higher concn. (cf. *ibid.*,
1953, 48, 110). C. P. WALLIS.

MUIC, N.

4358. Venom of the spider *Latreutes tredecimguttatus* Rees.
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the paper. On subjecting the strip to electrophoresis 6 protein
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constituents which reacted with ninhydrin were also found. An
immune serum for the toxin was prepared by i.v. injection into a
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gave the Ca salt which, on vigorous agitation with PCl_5
heating 15 min. on the azeot. bath, and distn. (100-20°
fraction) gave $\text{MeCH}_2\text{C}(\text{OCl})$. This was esterified with
 MeOH and the ester heated 30 min. with pyridine in a Kjel-
dahl flask to give 27% $\text{CH}_2=\text{CHCO}_2\text{Me}$. Gary Gerard

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