DOLZHIKOV, V.V.

Comparative study of rectilinear and smooth multiwave transitions. Izv.vys.ucheb.zav.; radiotekh. 8 no.5:611-614 S-O '65. (MIRA 18:12)

1. Submitted March 30, 1965.

DOLZHIKOV, Yu.P., aspirant

Vacuum mixing of concrete with porous aggregates. Stroi. mat. 10 no.5:17-19 My '64. (MIRA 17:9)

DOLZHKOV, D.A., inzh.

Standardization of two-roll general-purpose continuous mixers.
Khim. i neft. mashinostr. no.2:38-40 Ag '64 (MIRA 18:1)

STRELKOV, M. [Strilkov, M.], kand.tekhn.nauk; KRYZHANOVSKAYA, I. [KRYZHANIVS'KA, I.], kand.tekhn.nauk; SYRKIN, Ya., kand.tekhn. nauk; BLOKH, K., inzh.; DOLZHKOVA, G. [Dolzhkova, H.], inzh.

Colored slag cements. Bud.mat.i konstr. 2 no.1:31-32 F '60. (MIRA 13:6)

(Slag cement)

SYRKIN, Ye.M.; KRYZHANOVSKAYA, L.A.; KANOVICH, Ye.G.; [illegible], G.V.; BLOKH, K.B.; KIRYAYEVA, M.Ye.

Raw material base and flow diagram for the manufacture of white cement at the Zdolbunov Cement Plant. Trudy Ukrgiprotsementa no.6:3-11 '64. (MIRA 17:12)

DOLZHNIKOVA, L. G.

DOLZHNIKOVA, L.G.

Treating children with whooping cough. Vop.okh.mat. i det. 2 no.4: 17-20 Jl-Ag '57. (MLRA 10:9)

1. Iz kafedry fakul'tetskoy pediatrii (zav. - prof. P.A.Ponomareva) II Moskovskogo meditsinskogo instituta imeni N.I.Pirogova (dir. - prof. O.V.Kerbikov)
(WHOOPING COUGH)

DOLZKIEWICZ, T.

(6)

Warsaw, Sluzba Zdrowia, Vol XIV, No 19(663), 6 May 1962.

18. "1200 Times Around the Equator," T. Dolzkiewicz; p. 4.
19. "Quotations from Renaissance Thinkers," R.W. Dutt, MD; p. 4.
20. "List of Competitions," unsigned; p. 5.
21. "Help Wanted Adds," p. 5.
22. "The Problem of Absenteeism," Dr. Wl. Zemanek; p. 6.
23. "Historical Note: P. Potain," R. Dzierzanowski; p. 6.
24. "The Rural Health Cooperative Stefan Zeromski," unsigned; p. 6.
25. "The Diary of an Allergic," signed KHYS; p. 6.
26. "Chronicle of Activities of Scientific Societies," unsigned; p. 5.
27. "Defense of Doctoral Dissertations: Notices," unsigned; p. 6.

LISIN, A.; DOLZHIKOV, M.

Training specialists. Avt. transp. 42 no.8:48-50 Ag '64.
(MIRA 17:10)

[redacted]

[illegible], M.; PONOMAREV, V.; [illegible]IKHONOV, A.; KOPF, M., [illegible]IKOV, V.

Training specialists. Avt. transp. 43 no.9:45-48 S '65.
(MIRA 18:9)

TERESHCHENKO, A.I.; DOLZHIKOV, V.V.

Choice of the optimum form of a multiwave rectangular waveguide transition. Izv. vys. ucheb. zav.; radiotekh. 8 no.1:48-54 Ja-F '65. (MIRA 18:5)

KRZYZANOWSKI, Wiktor; BOBAK, Leopold; DOLZYCKI, Eliasz; KAMINSKA, Renata; KANIA, Jadwiga

Vitamin C resourses of the organism in children and young people. Pol. tyg. lek. 20 no.20:714-716 17 My '65.

1. Z I Kliniki Chirurgicznej AM w Krakowie (Kierownik: prof. dr. Jozef Bogusz).

[redacted]

DOMA, Nada, dipl. ing. Jetnik

Cultivating medicinal plants, a new activity of pharmaceutical technicians. Farmacevt vest. 14 no.10/12:[illegible] '63.

1. School for Pharmaceutical Technicians in Ljubljana, Ljubljana.

DOMA, S.

Mechanization of lignite mines (from experiments at present). Mining Journal, #2:47:Feb. 55

DOMAC, Radovan; DEVIDE, Zvonimir

New places of discovery of Phyllitis hybrida (Milde) Christensen in Adriatic islands. Acta pharm. jugosl. 4 no.4:184-187 1954.

1. Prirodosl-matematicki fakultet, Botanicki Institut, Zabreg.
(PLANTS
phyllitis hybrida, in Adriatic islands)

DOMAC, Radovan

Flora of the island of Vis. Acta pharm.jugosl. 5 no.1:3-42 '55.
(PLANTS,
medicinal, in Yugosl.)

PECOTIC,M.; DOMAC,V.

Contribution to psychiatric medication in restlessness in geriatrics. Neuropsihijatrija 11 no.1:84-89 '63

1. Iz Bolnice za zivcane i dusevne bolesti u Vrapcu; ravnatelj: prim. dr. J.Glaser.

YUGOSLAVIA/Human and Animal Morphology - Endocrine System. S

Abs Jour : Ref Zhur Biol., No 5, 1959, 21574

Author : Domac-Tesar, Biserka

Inst : Hrvatsk Natural Scientific Society

Title : Eosinophilic Cells in the Parthyroid Gland of the Human Fetus

Orig Pub : Biol. glasn. Hrovatsko prirodosl. drustvo, 1956, No 9, 63-67

Abstract : A study was made of the histological structure of the parathyroid gland of the 3 1/2-month-old human fetus. In contrast to the investigations of other scientists groups of eosinophilic cells were found in the connective tissue of the parathyroid gland. Probably the eosinophilic cells participate in calcium metabolism. -- Yu.A. Dushkin

Card 1/1

DOMAC-TESAR, Biserka

Functional importance of musculi arrectores pilorum. Biol glas 15 no.1:43-47 '62.

1. Zavod za histologiju i embriologiju Medicinskog fakulteta Sveucilista u Zagrebu.

DOMAGNOVIC, Z.

The modern problems of water supply..p. 1.
(GLASNIK, Vol. 2, No. 1/2, 1957

SO: Monthly List of East European Accessions (EEAL) LC Vol.6, No. 12, Dec. 1957
Uncl.

S/263/62/000/003/C01/015
I004/I204

AUTHOR: Domagala, Hugo

TITLE: Pneumatic control valve for temperature or pressure regulation

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. Izmeritel'naya tekhnika, no. 3, 1962, 29, abstract 32.3.180 P. Pneumatisch gesteuertes Regelventil für Temperatur-bzw. Druckregler, GDR patent, class, 42 q, 3/06, 42 r, 1/03, no. 20045, October 10, 1960

TEXT: A regulating valve with pneumatic control by means of a chamber with a sensitive membrane is proposed. Inside the chamber there is a piston whose position is determined by the given value of the pressure or the temperature. Variation of these parameters causes displacement of the piston and the flow of air through the output nozzles of the chamber is affected. This affects the pressure in the chamber and causes a displacement of the sensitive membrane. The latter is directly connected to a spring which controls the position of the valve. Examples of controlling the valve by means of pressure sensitive pickups are given.

[Abstracter's note: Complete translation.]

Card 1/1

STOPA, S. Z.; DOMAGALA, H.

The anticlinal of Zabrze (Carboniferous of Upper Silesia). Bul geolog PAN 9 no.1:29-33 '61.

1. Katedra Ples Wegli, Akademia gorniczo-Hutnicza, Krakow. Presented by A. Bolewski.

(Geology, Stratigraphic) (Silesia)

DOMAGALA, Michal, mgr

Operational period of new type fishing vessels. Bud okretowe Warszawa 8 no.5:150-153 My '63.

1. Wydzial Inzynieryjno-Ekonomiczny, Politechnika, Szczecin.

DOMAGALA, R.

Report from a discussion meeting. p. 3 of cover.
(PRZEGLAD SKORZANY. Vol. 11, no. 10, Oct. 1956, Lodz, Poland)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 12, Dec. 1957. Uncl.

DOMAGALA, T.

"A few words on the aesthetics of models, p. 829, (SKRZYDLATA POLSKA, Vol. 10, No. 52, Dec. 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 5, May 1955, Uncl.

DOMAGALA, T.

Surface calculation of stabilizers. p. 299. (SKRZYDLATA POLSKA, Vol. 10, No. 19, May 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

DOMAGALINA, E.

POL

Biological activity of Polish industrial oils. I. Anthracene oil. Eugenia Domagalina (Zaklad Chem. Org. i Biol. Akad. [illegible]). *Acta Polon. Pharm.* 11, 101-7 (1954).—Anthracene oil and its fractions obtained chromatographically from Al[illegible] with naphthyl ether were found to be highly toxic and carcinogenic in mice. The carcinogenic fractions were found to be free of 3,4-benzopyrene.

L. J. Piotrowski

DOMAGALINA, E.

3

POL

3187 547.943 : 547.550.7

Suszko J., Domagalina E. Investigation of the Diazo-5'-Alkaloids of the Quinine Group and their Decomposition Products. I. Diazo-5'-Anhydrides.

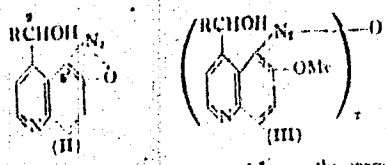
„Badania nad dwuazo-5'-alkaloidami grupy chininy i produktami ich rozkładu. I. Dwuazo-5'-bezwodniki", Roczniki Chemii (PAN). No. 1, 1954, pp. 61—69.

It has been demonstrated that diazo compounds deriving from amine-5'-alkaloids of the quinine type form two kinds of anhydrides; the „intra-molecular" one is formed by hydrolysis of the methoxyl group, the other, „intermolecular" one is formed by the reciprocal action of diazo-systems contained in 2 molecules of alkaloid.

DOMAGALINA, EUGENIA

POL. H

5'-Diazo alkaloids of the quinine type and products of their decomposition. 5'-Diazo anhydrides. Jerzy Suszko and Eugenia Domagalina. *Roczniki Chem.* 28, 61–9(1954)(Ger-C summary).—In this abstr. R = 3-ethyl-8-quinuclidinyl Diazotization of 9'-aminodihydroquinidine (I) gave II, m. 143–5°, $[\alpha]_D^{20}$ 93°, working up the mother liquors from II gave the anhydride (III), m. 316–18° (decompn.).



(II) (III)

Similarly 9-chloro-9-deoxy analog of I gave the corresponding 9-chloro-9-deoxy anhydr of II, m. 135–4°, $[\alpha]_D^{20}$ −48° and the 9-chloro-9-deoxy analog of III, m. 125–7°, $[\alpha]_D^{20}$ −135°. Diazotization of I acetate gave the corresponding III acetate, m. 140°. 6-Amino-4-methoxyquinoline yielded the 5-diazo-6-methoxyquinoline anhydride, m. 119–21°, and 5-chloro-6-hydroxyquinoline anhydride, m. 85°.

I. M. R.

DOMAŃSKA, E.

Cusko, J. Studies on diazo-5-alkaloids of the quinine group and on decomposed products. II. Diazo derivatives of dihydroquinidine and their transformations. p. 495. RUCZNIKI CHEMII, Warszawa, Vol. 29, no. 2/3, 1955.

SC: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955, Uncl.

COUNTRY : Poland H-17
CATEGORY :

ABS. JOUR. : RZKhim., No. 21 1959, No. 75772

AUTHOR : Domagalina, E., Ludwiczak, R. S., and Zyczynska, L
INST. : Not given
TITL : Beta-Sitosterol from Tall Oil Produced in Poland

ORIG. PUB. : Przemysl Chem, 37, no 8, 540-542 (1958)

ABSTRACT : The importance of tall oil as a valuable industrial source of phytosterol is discussed. The physical properties of Polish ST Grade tall oil have been determined and a convenient method for the extraction of phytosterol, a raw material for the production of steroid hormones, and a method for the purification of beta-sitosterol are given.

From authors' summary

CARD: 1/1

DOMALINA, E.; SUSKO, J.

Research on diazo-5' -quinine alkaloids and on the products of their decomposition. III. Diazo derivatives of vinyl alkaloids and their transformations. p. 93.

ROCZNIKI CHEMII. (Polska Akademia Nauk) Warszawa, Poland. Vol. 33, no. 1, 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 9, September 1959. Uncl.

S/081/62/000/024/051/073
B166/B186

AUTHORS: Domagalina, Eugenia, Bałoniak, Sylwester

TITLE: Cyclic hydrazides of aromatic and heterocyclic dicarboxylic acids. II. The reaction of producing hydrazines of certain 2-phenylphthalazinone derivatives

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1962, 395, abstract 24Zh361 (Roczn. chem., v. 36, no. 2, 1962, 253 - 258 [Pol.; summaries in Russ., Eng. and Ger.])

TEXT: The reaction of 2-(4'-aminophenyl)-4-chlorophthalazine (I) with N_2H_4 is difficult and the substance obtained can only be separated in the form of an acetyl derivative of 2-(4'-acetylaminophenyl)-4-acetylhydrazinophthalazinone (II). The action of N_2H_4 on 2-(2',4'-dinitrophenyl)-4-methoxyphthalazinone (III) and 2-(2',4'-diaminophenyl)-4-methoxyphthalazinone (IV) produced 2-[2(4')-nitroso-4'(2')-aminophenyl]-4-methoxyphthalazinone (V) and 2-(2',4'-diacetyldiaminophenyl)-phthalazindi-1,4-one (VI), respectively, instead of the expected hydrazine derivatives. Nitrating 2-phenyl-4-R-phtha-

Card 1/4

lazinone (VII) (R = Cl) (VIIa) and VII (R = OCH_3) (VIIb) gives 2-(4'-nitrophenyl)-4-chlorophthalazinone (VIII) and III, which were reduced to I and IV respectively. The position of the NO_2 group in VIII was established by using NaOH to convert it into the well known N-(n-nitroanilino)-phthalimide (IX). The structure of III was proved by counter synthesis. VIIb was produced by reacting VII (R = Cl) with CH_3ONa, 15 ml HNO_3 (d 1.49) are added drop by drop (0^o) to a solution of 10 g VIIa in 100 ml concentrated H_2SO_4, the mixture is agitated for 10 min and then poured out onto ice giving VIII, $C_{14}H_8O_3N_3Cl$, yield 4.5 g, m.p. 245°C (decomp.; from $CHCl_3$ + CH_3OH, 5 : 1). A mixture of 0.5 g VIII and 40 ml 5% NaOH is heated for 30 min, whereupon it is chilled and acidified with HCl acid, giving IX, yield 0.2 g. A mixture of 2 g VIII, 10 g $SnCl_2$, 5 ml concentrated HCl and 40 ml glacial CH_3COOH is boiled for 2 hrs below the boiling point of the solution, this is then cooled and the sediment is treated with 10 % NaOH which gives I, $C_{14}H_{10}ON_3Cl$, m.p. 213 - 214°C (from $CHCl_3$ + CH_3OH), and the acetyl deriva-

tive, m.p. 248°C. A mixture of 2 g I, 8 ml 80 % $N_2H_4 \cdot H_2O$ and 2 g $N_2H_4 \cdot H_2SO_4$ is boiled for 4 hrs in 40 ml $CH_2(CH_2OH)_2$, this is then cooled, 10 ml water are added and the resulting product is a crude substance with a m.p. ~196°C, which by treating with $(CH_3CO)_2O$ is converted into II, $C_{18}H_{17}O_3N_5$, yield 0.3 g, m.p. 298 - 300°C (decomp.; from glycol). To a solution of 5.2 g VIIa in 80 ml absolute CH_3OH is added 1.84 g Na, this mixture is heated for 1 hr; then the hot solution is filtered and cooled giving VIIb, yield 4.8 g, m.p. 116 - 117°C (from CH_3OH). 4 g VIIb are added a portion at a time (at 10 - 20°C) to 50 ml HNO_3 (d 1.49), the solution is poured out gradually into icy water, producing III, $C_{15}H_{10}O_6N_4$, yield 3 g, m.p. 262 - 263°C (from glacial CH_3COOH). A solution of 0.2 g 2-(2',4'-dinitrophenyl)-phthalazindi-1,4-one in 10 ml 2 % Na_2CO_3 is boiled dry, then 5 ml $(CH_3)_2SO_4$ are added to the residue, this mixture is heated until a solution forms whereupon it is poured out onto ice, giving III, yield 0.1 g. A mixture of 2.4 g III, 24 ml concentrated HCl, 72 ml glacial CH_3COOH and 15 g $SnCl_2$ is boiled for 1.5 hrs,

the cooled mixture is diluted with water until the complex dissolves, then 20% NaOH is added to precipitate IV, $C_{15}H_{14}O_2N_4$, yield 1 g, m.p. 247 - 248°C (decomp.; from CH_3OH chloroform), and the acetyl derivative m.p. 240°C. A mixture of 1 g III, 10 ml 95 % $N_2H_4 \cdot H_2O$ and 10 ml absolute CH_3OH is boiled for 2 hrs, after 24 hrs V is separated, $C_{15}H_{12}O_3N_4$, yield 0.2 g, m.p. 185 - 187°C (from CH_3OH), also the acetyl derivative, m.p. 128 - 129°C (from alcohol). A solution of V in hot water receives an addition of NH_4OH, and H_2S is bubbled through at 60 - 70°C, after which the mixture is acidified with HCl and is heated, filtered and boiled down to a small volume, whereupon IV is precipitated by the action of NaOH. A mixture of 0.6 g IV, 10 ml 95 % $N_2H_4 \cdot H_2O$ and 5 ml glycol is boiled for 4 hrs, it is boiled down in vacuo, then the residue is heated for 2 min with excess $(CH_3CO)_2O$, giving VI, $C_{18}H_{16}O_4N_4$, yield 0.5 g, m.p. 337°C (decomp.; from glycol). For communication I see RZhKhim., no. 9, 1960, 34829. [Abstracter's note: Complete translation.]

DOMAGALINA, Eugenia; OCHYNSKA, Janina

New methods of determining the total alkaloid content in the roots of Chelidonium maius. Chem anal 8 no.2:225-232 '63.

1. Department of Pharmaceutical Chemistry, Academy of Medicine, Lublin.

SUKHANOV, A.F., doktor tekhn.nauk; LUTUZOV, B.N., kand.tekhn.nauk; KANTOVICH, L.I., gornyy inzh.; DOMAKHOVSKIY, A.V., gornyy inzh.

Determining the optimal conditions for roller boring in hard, mildly abrasive rock in strip mines. Gor.zhur. no.3:35-39 Mr '65. (MIRA 18:5)

1. Moskovskiy institut radioelektroniki i gornoy elektromekhaniki.

KUTUZOV, B.N., kand. tekhn. nauk; MIKHEYEV, I.G., gornyy inzh.; DOMAKHOVSKIY, A.V., gornyy inzh.

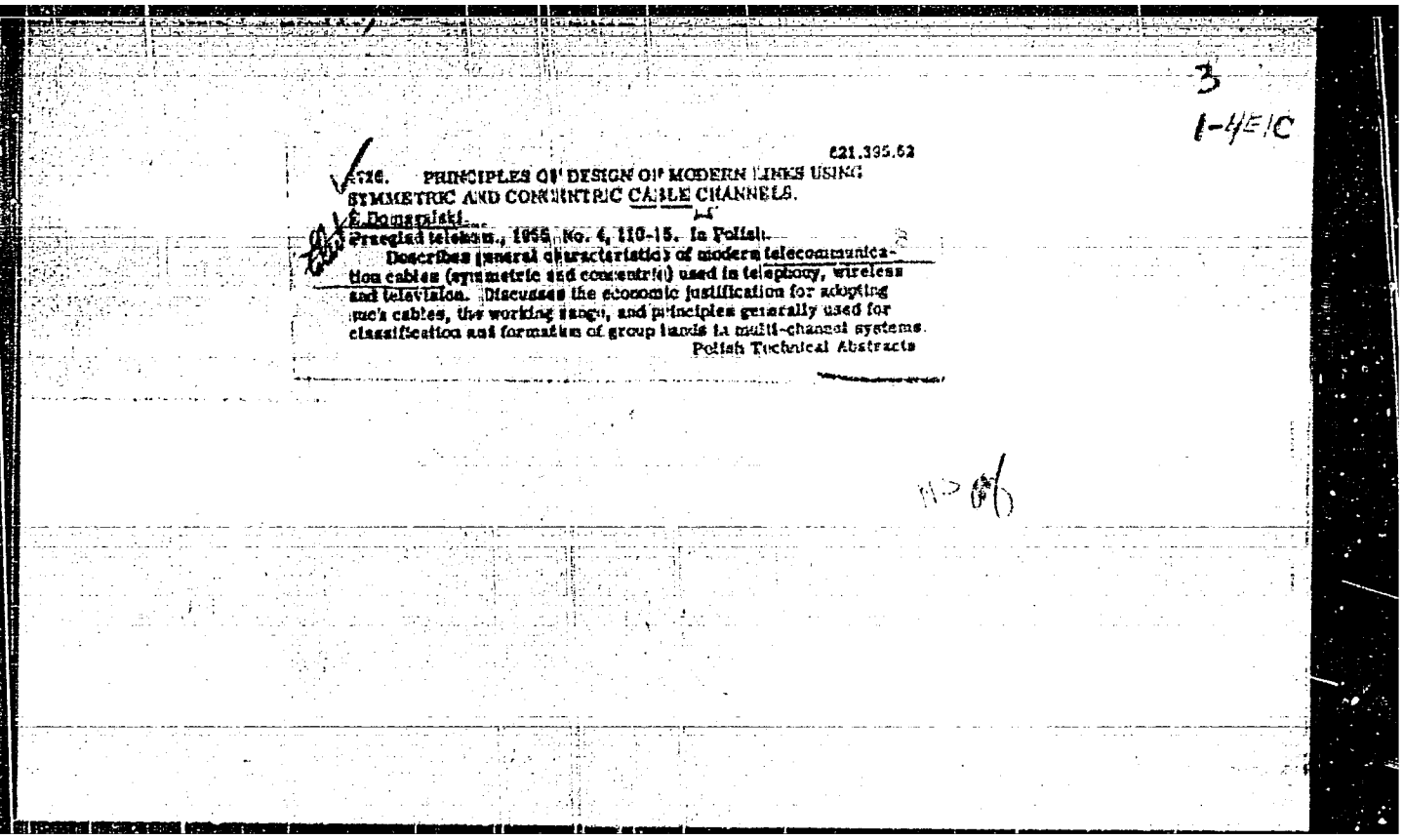
Effect of the amount of compressed air used on the efficiency of roller bit drilling. Gor. zhur. no.4:32-34 Ap '65. (MIRA 18:5)

1. Moskovskiy institut radioelektroniki i gornoy elektromekhaniki.

DOMAGALSKY, E.

Linie telekomunikacyjne. (Ksiazka zatwierdzona do uzytku szkolnictwa zawodowego Warszawa, Wydawn. Komunikacyjne, 1954.) 422 p. (Telecommunication lines; authorized for use in vocational schools. illus., diagrs., tables)

SO: Monthly list of East European Accessions List, (EEAL), LC, Vol. 4, No. 11 Nov. 1955, Uncl.



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1-4E1C

621.395.62

6716. PRINCIPLES OF DESIGN OF MODERN LINES USING SYMMETRIC AND CONCENTRIC CABLE CHANNELS.

S. Domaradzki.

Przegląd telekom., 1955, No. 4, 110-15. In Polish.

Describes general characteristics of modern telecommunication cables (symmetric and concentric) used in telephony, wireless and television. Discusses the economic justification for adopting such cables, the working ranges, and principles generally used for classification and formation of group bands in multi-channel systems.

Polish Technical Abstracts

DOMAGALSKI, H.

Tar-paper roofing. Przeglad Drog. Dodatek.

p. 137 (Przeglad Kolejowy Drogowy. Vol. 8, no. 9, Sept. 1956. Warszawa, Poland)

Monthly Index of East European Accessions (EEMI) LC. Vol. 7, no. 2, February 1958

DOMAHIDY, MIKLOS

A borkezeles nehany kerdese. /A Begyujtesi Miniszterium tankonyviro munkakozossegenek munkaja. Felelos: Domahidy Miklos es Bekefi Gusztav/ Elelmiszeripari es Begyujtesi Konyv- es Lapkiado Vallalat, 1952, 36 p. /Some problems of wine making/

SO: Monthly List of East European Accessions, Vol 3 No 2 Library of Congress Feb 54 Uncl

DOMANIDY, M.

Modern wine cellars. p. 117. ELELMEZESI IPAR. (Mezogazdasagi Ipari Tudomanyos Egyesulet) Budapest. Vol. 10, no. 4, Apr. 1956.

SOURCE: East European Accessions List (EEAL) Library of Congress Vol. 5, no. 8, August 1956

DOHANIDY, M.

The Exhibition of Instruments of the Food Industry. p. 126. ELELMEZESI IPAR. (mezogazdasagi Ipari Tudomanyos Egyesulet) Budapest. Vol. 10, no. 4, Apr. 1956.

SOURCE: East European Accessions List (EEAL) Library of Congress Vol. 5, no. 8, August 1956

H-27

COUNTRY : Hungary
CATEGORY :

19781

ABS. JOUR. : RZKhim., No. 51960, No.

AUTHOR : Mercz, A. and Domahidy, M.
INST. : Not given
TITLE : The Design of a Prototype Plant for the Processing of White Wine

ORIG. PUB. : Szoeleszeti Kutato Int Evk, 11, No 2, 261-279, 1952-1957 (1958

ABSTRACT : The project provides for the location of the presses at the periphery and assures the establishment of simple and economic conditions for the production of high-quality wines. Design data are presented on the volume of the press-buckets [sic] and for the supply of specific pressures to the various types of presses. A method has been developed for carrying out a time study for the purpose of comparing the productivity of the various units and for controlling their operation. In

CARD: 1/2

H-27

19781

COUNTRY : Hungary
CATEGORY :
ABS. JOUR. : RZKhim., No. 5 1960, No.
AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : order to improve the operation of the hydraulic presses, devices for the automatic regualtion of the pressure in the buckets are proposed. The prototype design provides for a ca 60% increase in press productivity at a saving in manpower (5-7 operators) and no decrease in the high quality of the wine. Eight drawings of the equipment and the format of the time study sheets are included.

From authors's summary

CARD: 2/2

363

DOMAINKO, Dragutin, prof. inz.

Technology and economics. Energija Hrv 12 no.1/2:42-43 '63.

1. Ekonomski fakultet, Zagreb.

DOMAINKO, Dragutin, univ. prof., dipl. inzenir (Zagreb, Gunduliceva ul. 60).

Importance of the knowledge of economics and work planning in the training of technical and vocational experts. Automatika 4 no.4:227-228 '63.

DOMAINKO, Dragutin, inz., prof. (Zagreb, Gunduliceva 60)

Role of economic and applied sciences and the science of labor organization in the formation of the Yugoslav experts with University degrees. Tehnika Jug 18 no.7:Supplement: Organizacija rada 13 no. 7:1366-1368 Jl'63.

1. Univerzitet u Zagrebu.

DOMAKHIN, Serafim Andreyevich

[Responsibility for crimes in automotive transportation; problems in violation of traffic regulations by transport workers] Otvetstvennost' za prestupleniia na avtotransporte; voprosy kvalifikatsii narushenii pravil dvizheniia rabotnikami avtotransporta. Moskva, Gosyurizdat, 1956. 49 p. (MLRA 10:1)
(Transporation, Automotive--Law and legislation)
(Criminal law)

AFONICHEVA, A.I. (Kaluzhskaya obl.); DOMAKHINA, Ya.V. (Kaluzhskaya obl.)

Baryatino station. Zashch.rast. ot vred. i bol. 9 no.11:41 '64.
(MIRA 18:2)

DOMAN, I.

HUNGARY / Diseases of Farm Animals. General Problems. R

Abs Jour: Ref Zhur-Biol., No 8, 1958, 35786.

Author : Doman, Imre
Inst : Not given.
Title : Results of Using ACTH in Veterinary Practice.

Orig Pub: Magyar allatorv. lapja, 1957, No 4-5, 118-120.

Abstract: The preparation was tested with positive results on pigs in cases of degeneration and inflammation of the liver, as well as on horses with acute serotic dermatitis present in allergic dermatitis. Also, it was tested on gouty arthritis in chickens, and in ketosis of sheep and goats.

Card 1/1

HUNGARY

DOMAN, Imre, Dr, Jaras chief veterinarian (Jarasi foallatorvos); Szar-vas.

"On the Practical Value of Lapinized Swine Fever Virus Vaccine."

Budapest, Magyar Allatorvosok Lapja, Vol 16, No 2, Feb 61, pp 87-89.

Abstract: [Author's English summary modified] The author describes two cases in which lapinized virus vaccine and swine fever serum were used effectively in the control of the infection of swine herds, supplementing veterinary sanitary measures. Some disagreeable experiences with the lapinized vaccine are also reported. There are no references.

DOMAN, Imre, dr., jarasi foallatorvos (Szarvas)

Data on the reliability of intradermic tuberculin tests. Magy allatorv lap 19 no.3:109-111 Mr '64.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000410910002-4"

DOMAN, Imre, Dr, Jaras chief veterinary, Szarvas.

"Mass Losses Among Suckling Pigs Caused by Mammary Dermatitis of the Dams."

Budapest, Magyar Allatorvosok Lapja, Vol 21, No 3, Mar 66, pages 133-134.

Abstract: [Author's English summary modified] Mammary dermatitis of nursing sows was mostly observed during winter. Its first symptom is reddening of the skin followed by the formation of small nodes and blebs as well as a discharge from the skin of the udders. The fluid hardened into a covering on the entire udder consisting of scab membrane. The teats were covered by a thimble-shaped scab of blackish or grayish-black color which plugged their orifices and could be removed after 7 days as a cap. As a consequence of the disease, 120 piglets (7-14 days old) died of starvation. The affliction was controlled by local and general treatment, supplementary feeding of the piglets and improvement of the hygienic conditions. Streptococci were isolated from the diseased parts. It may have been rubbed into the skin by the sucking piglets from its origin in the mouldy bedding. Exanthema, i.e. coccogenic mammary eczema in females and scrotal eczema in males, is also known to occur on the skin of people working with harvested straw during late summer. No references.
1/1

HUNGARY

DOMAN, Imre, Chief Jaras Veterinarian, Dr., in Szarvas.

"Mass Occurrence of Gastroenteritis in Pig Stocks"

Budapest, Magyar Allatorvosok Lapja, Vol 21, No 6, Jun 1966, pp 251-253.

Abstract: The symptoms of gastroenteritis in pigs, taking a great toll in Hungarian pig stocks, were described. The author describes his experiences with this disease and concludes that it is not the same as the disease designated as infectious gastroenteritis in the literature. The differences are both pathogenic and clinical in nature. He designates the disease as virus gastroenteritis. The incidence in Hungary appears to be increasing. No references.

1/1

HUNGARY

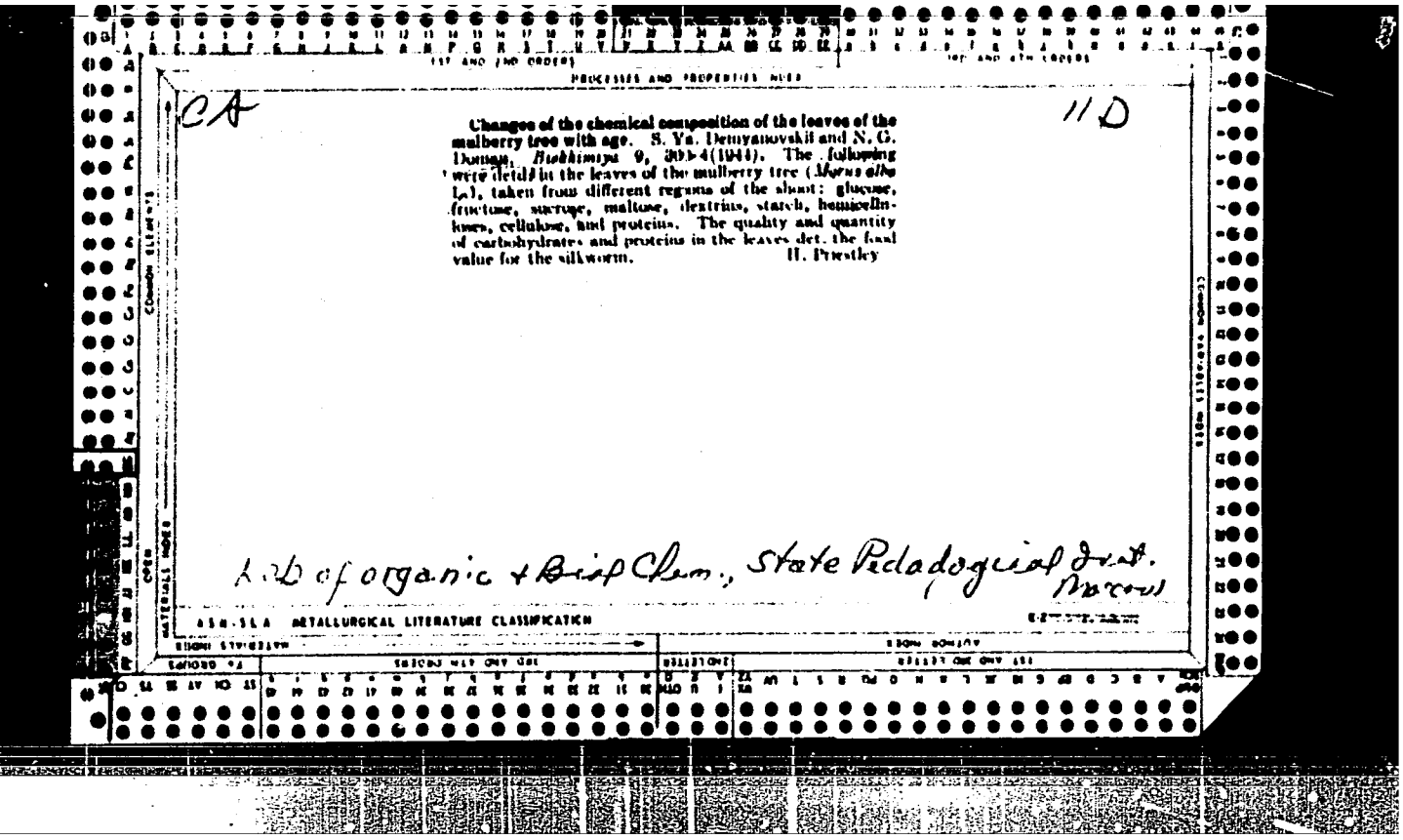
DOMAN, Imre, Chief Jaras Veterinarian, Dr., in Szarvas.

"Mass Occurrence of Limb Diseases in Hogs"

Budapest, Magyar Allatorvosok Lapja, Vol 21, No 6, Jun 1966, pp 274-275.

Abstract: The author describes skin-thickening, abscesses, ulcerous wounds, phlegmous processes, panaritium, and various types of joint inflammation observed in a great number of hogs kept in State farms. The incidence was highest during the winter months, when it affected up to 15% of the stock. The observations were briefly described and discussed. Attempts were made to assign the causes for the various conditions noted. Means for combating the various diseases were investigated. No references.

1/1



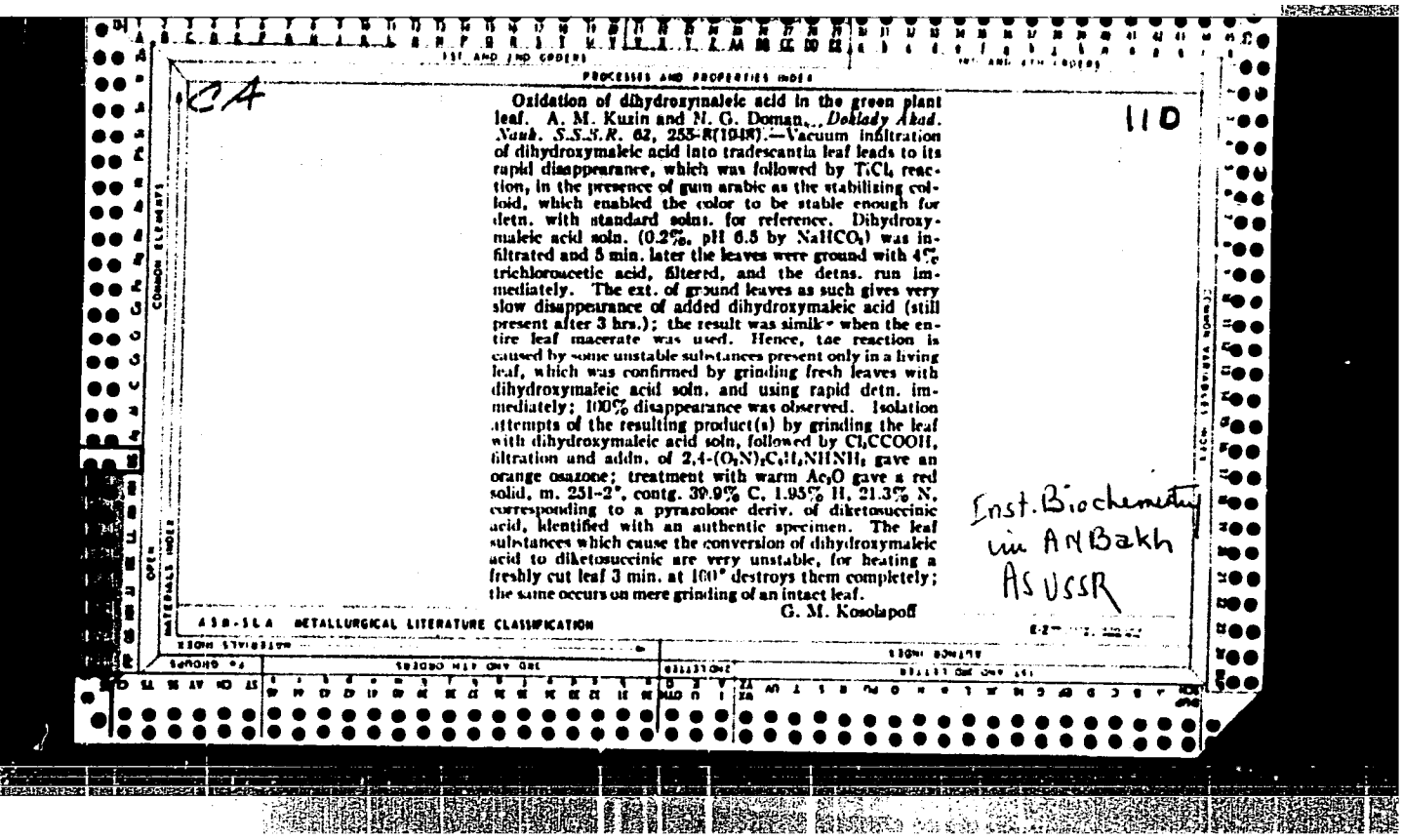
CA

11D

Changes of the chemical composition of the leaves of the mulberry tree with age. S. Ya. Demyanovskii and N. G. Doman. *Biokhimiya* 9, 303-4(1944). The following were detd. in the leaves of the mulberry tree (*Morus alba* L.), taken from different regions of the shoot: glucose, fructose, sucrose, maltose, dextrins, starch, hemicelluloses, cellulose, and proteins. The quality and quantity of carbohydrates and proteins in the leaves det. the food value for the silkworm. H. Priestley

Lab of organic + Biol Chem., State Pedadogical Inst. Moscow

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION



CA

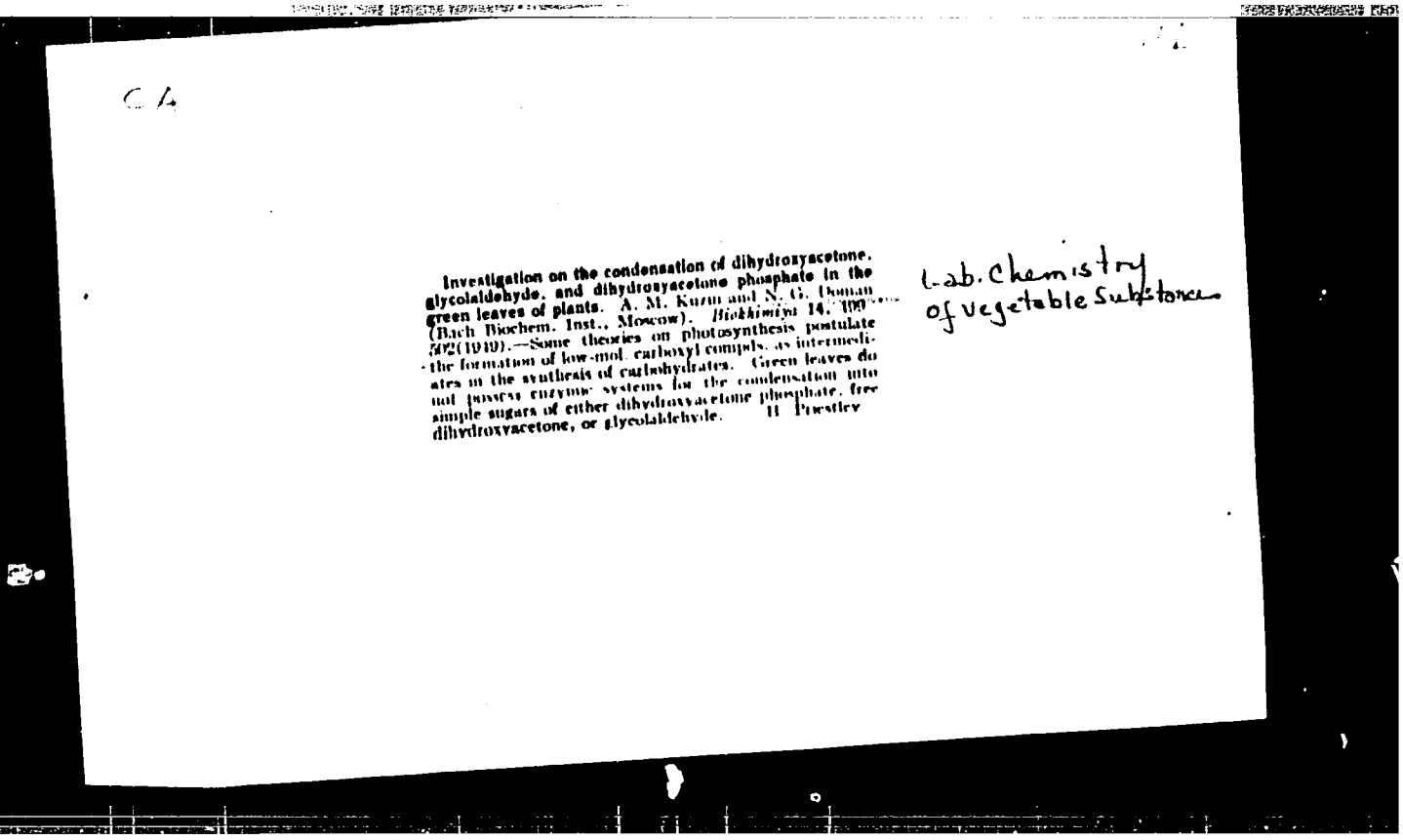
11D

Oxidation of dihydroxymaleic acid in the green plant leaf. A. M. Kuzin and N. G. Doman. *Doklady Akad. Nauk. S.S.S.R.* 62, 253-8(1948).—Vacuum infiltration of dihydroxymaleic acid into tradescantia leaf leads to its rapid disappearance, which was followed by $TiCl_4$ reaction, in the presence of gum arabic as the stabilizing colloid, which enabled the color to be stable enough for detn. with standard solns. for reference. Dihydroxymaleic acid soln. (0.2%, pH 6.5 by $NaHCO_3$) was infiltrated and 5 min. later the leaves were ground with 4% trichloroacetic acid, filtered, and the detns. run immediately. The ext. of ground leaves as such gives very slow disappearance of added dihydroxymaleic acid (still present after 3 hrs.); the result was similar when the entire leaf macerate was used. Hence, the reaction is caused by some unstable substances present only in a living leaf, which was confirmed by grinding fresh leaves with dihydroxymaleic acid soln. and using rapid detn. immediately; 100% disappearance was observed. Isolation attempts of the resulting product(s) by grinding the leaf with dihydroxymaleic acid soln, followed by Cl_3CCOOH, filtration and addn. of $2,4\text{-}(O_2N)_2C_6H_3NHNH_2$ gave an orange osazone; treatment with warm Ac_2O gave a red solid, m. 251–2°, contg. 39.9% C, 1.95% H, 21.3% N, corresponding to a pyrazolone deriv. of diketosuccinic acid, identified with an authentic specimen. The leaf substances which cause the conversion of dihydroxymaleic acid to diketosuccinic are very unstable, for heating a freshly cut leaf 3 min. at 100° destroys them completely; the same occurs on mere grinding of an intact leaf.

G. M. Kosolapoff

Inst. Biochemistry im ANBakh AS USSR

A58-SLA METALLURGICAL LITERATURE CLASSIFICATION



C.A.

Investigation on the condensation of dihydroxyacetone, glycolaldehyde, and dihydroxyacetone phosphate in the green leaves of plants. A. M. Kuzin and N. G. Ibman (Bach Biochem. Inst., Moscow). *Biokhimiya* 14, 199-502(1949).—Some theories on photosynthesis postulate the formation of low-mol. carbonyl compds. as intermediates in the synthesis of carbohydrates. Green leaves do not possess enzyme systems for the condensation into simple sugars of either dihydroxyacetone phosphate, free dihydroxyacetone, or glycolaldehyde. H. Priestley

Lab. Chemistry of Vegetable Substances

Peroxidase in gutta plants. N. G. DOMAN. *Doklady Akad. Nauk U.S.S.R.*, 1950, 71, [illegible]-4. The production of rubber in plants originates from the usual products of assimilation, as, for example, carbohydrates. This gives a basis for supposing that the production in vegetable organisms of such hydrocarbons as rubber or gutta-percha involves a multi-grade process including a series of oxidising-reducing reactions. The latex of *Hevea* contains oxidase, peroxidase, and dehydrase. According to O. Ambros, enzymic oxidation accelerates the polymerisation of isoprene in plant cells. S. O. Grebinsky claims that there exists an inverse ratio between rubber content and the activity of oxidising enzymes in rubber plants. With regard to gutta-percha plants, the present results were contrary to this claim. This prompted the examination of the oxidising enzymes of the important gutta-percha plants: *Euonymus verrucosa* and *Eucommia*. *Euonymus* contained 10 to 15% of gutta, usually only in the root-cortex. *Eucommia* contained 10 to 12% of gutta in the root cortex, 7 to 10% in the bark of the trunk, and 4 to 5% in the leaves. Peroxidase and polyphenoloxidase activities were ascertained in these two plants, and also in kok-saghyz and other plants. Research indicated that at points where gutta is produced, peroxidase activity is [illegible] intense. 3\132

CA

Study of photosynthesis by ionophoresis. A. M. Kuzin and N. G. Dogaev. *Doklady Akad. Nauk S.S.S.R.* 72, 77-80 (1950).—Ionophoretic expts. were performed in a glass plate vessel, vertically partitioned, irradiated with a 300-w. lamp and equipped with slow water input and outflow. The expt. middle chamber, filled with the leaves under study was sepd. from the electrode chambers by cellophane and the electrode plates were kept at 6 v. drop with 0.5 ma. current flowing through the system over a 24-hr. expt. period. From *Potamogeton perfoliatus* leaves ionophoresis exts. photosynthetic-active substances which differ from those extd. in dark states. These substances are acidic (found in anode compartment) and give reactions of keto acids, reduce ammoniacal Ag_2O and $HgCl_2$ but react weakly with Fehling soln. until hydrolyzed by acids. The results indicate that acid derivs. of carbohydrates participate in photosynthesis. Participation of phosphate is rejected as easily hydrolyzed P^1 is absent, while tightly bound P^1 is present equally in light and dark reaction products. Pyruvic acid was absent, but glyoxalic acid was present as were peroxides. Possibly CO_2 is fixed on the mols. of carbohydrates forming alduronic acids. G. M. Kesol'poff

1. DOMAN, N. G.; KAGAN, Z. S.

2. USSR (600)

4. Chromatographic Analysis

7. Chromatographic determination of phosphoric esters by distribution on paper, Biokhimiia, 17, No. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March, 1953. Unclassified.

CA

11D

The nature of intermediate products of photosynthesis N. G. Doman (A. N. Bakh Biochem. Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* **86**, 1017–20 (1952). – Plants of *Phaseolus vulgaris* were irradiated with incandescent bulbs while growing in usual sand culture. Leaves cut after irradiation were placed in a chamber with 0.5% CO_2 with radioactive C^{14} for 1 sec., then transferred to a chamber with ordinary CO_2 (0.5%) and exposed to light for various periods. After extn. with hot H_2O, the ext. was extd. with Et_2O and evapd. to an aq. soln. and the residue enzymol. for radioactivity and studied chemically, by addn. of EtOH (to 80%) yielding a ppt. A, the mother liquor from which with alc. $BaCl_2$ gave solid B, and its mother liquor, after removal of Ba by CO_2, was again tested for radioactivity after sepn. of fractions on cation- and anion-exchange resins. The results show that all labeled C even in shortest exposures goes into soln. from which over 90% is ppted. as solid A. As exposure to plain CO_2 is increased the labeled C goes from fraction A to insol. fraction sol. in 80% EtOH. Fraction B gives irregular results. In short exposure some 6% of labeled C is in fraction not ppted. by alc. $BaCl_2$, but longer exposures increase its concn. in this fraction. Expts. with keeping the leaves, after 1-sec. exposure, in the dark chambers gave results similar to those on "light" expts., except that the residual insol. fraction is unchanged in darkness, while on irradiation it shows a significant increase. The results indicate that the primary photosynthetic products cannot be substances of low mol. wt.

G. M. Kosolapoff

DOMAN, N.

USSR

Rate of the primary reaction for the conversion of carbon dioxide in the photosynthesis process. N. G. Doman. *Doklady Akad. Nauk S.S.S.R.* 85, 607-10(1952); cf. C.A. 46, 10306i.—Two equal portions of a leaf were exposed to $C^{14}O_2$ for 1 sec. The first was then placed in a container of liquid N. The second was further exposed to an atm. of CO_2 which contained no $C^{14}O_2$ for varying lengths of time. Then it was also placed in liquid N. In all cases the second portion was 10–20% more radioactive than the first, although the amt. of $C^{14}O_2$ absorbed was the same. It is shown that the first portion loses $C^{14}O_2$, which has not as yet had time to be assimilated. This shows that the product isolated in an earlier expt. is actually the first stable product of photosynthesis. J. Rovtar Lenz

L 7056-66 EWT(1)/FS(v)-3 DD

ACC NR: AP5028095 SOURCE CODE: UR/0326/65/012/006/1005/1011

AUTHOR: Shkol'nik, R. Ya.; Doman, N. G.; Spektorov, K. S.; Lin'kova, Ye. A.

ORG: Institute of Biochemistry im. A. N. Bakh, Academy of Sciences, SSSR; Institute of Plant Physiology im. K. A. Timiryazev, Academy of Sciences, SSSR, Moscow (Institut biokhimii Akademii nauk SSSR i Institut fiziologii rasteniy Akademii nauk SSSR)

TITLE: Insoluble products of photosynthesis of a synchronous Chlorella pyrenoidosa culture at different stages of its development

SOURCE: Fiziologiya rasteniy, v. 12, no. 6, 1965, 1005-1011

TOPIC TAGS: photosynthesis, chlorella, synchronous culture, chromatography

ABSTRACT: As part of the continuing effort to determine the intermediate products of photosynthesis, an attempt was made to identify those radioactive products of photosynthesis which cannot be extracted from a synchronous culture of Chlorella pyrenoidosa with acidified alcohol (25C). A chart of the solvents used in chromatography and the steps taken is given in the original article. It was found that the composition of the residue depends both on the duration of exposure to light and on the stage of development of the culture. Analysis showed this residue to consist of: 1) phosphorylated sugars and phosphoglyceric acid (both of which are partially extracted by acidified alcohol at room temperature); 2) substances of the polysaccharide type; 3) substances of a protein character; and 4) certain unknown substances, which remain

Card 1/2 UDC: 581.132

L 7056-66

ACC NR: AP5028095

at the starting point during chromatography even when several solvents are used. Polysaccharide-type substances appeared in the insoluble residue after only 2 sec of photosynthesis. After 5 min of photosynthesis in $C^{14}O_2$, the composition of the insoluble residue of a synchronous Chlorella culture in the fourth stage of development differed sharply from the composition of such a residue in the first and third stages of development. Sugars present in the residue as a result of the hydrolysis of polysaccharides also differed in composition depending on the developmental stage. Note: the four developmental stages of a synchronous culture of Chlorella pyrenoidosa selected were: 1) autospores (20 min of illumination); 2) 3 hr, 20 min of illumination; 3) 7 hr, 20 min of illumination; and 4) end of divison inside the mother cells and beginning of egress of autospores (9 hr, 20 min of illumination). Orig. art. has: 4 figures and 1 table. [JS]

SUB CODE: LS/ SUBM DATE: 15Oct64/ ORIG REF: 004/ OTH REF: 005/ ATD PRESS: 4143

Card 2/2

DOMAN, N. G., KUZIN, A. M., [illegible], Ya. V., and KHUDYAKOVA, [illegible] I.

Problem of diversity of primary products of photosynthesis in different species of plants. Dokl. AN SSSR 86, no 2, 1952.

DOMAN, N.G.; TERENIN, A.N., akademik.

Secretion of primary products in photosynthesis. Dokl.AN SSSR 93 no.1:115-117 N '53. (MLRA 6:10)

1. Akademiya nauk SSSR (for Terenin). 2. Institut biokhimii im. A.N.Bakha Akademii nauk SSSR (for Doman). (Photosynthesis)

DOMAN, N. G.

Chemical Abst.
Vol. 48 No. 3
Feb. 10, 1954
Rubber and Other Elastomers

A nephelometric micromethod for the estimation of gutta and of rubber in plants. N. G. Doman (Acad. Sci. U.S.S.R., Moscow). *Biokhimiya* 18, 136-9 (1953).--The material to be analyzed is air-dried and ground to homogeneity; 0.05-0.5 g. of the material is placed in filter paper bags. All such packages are placed in a glass flask and covered with acetone (50-100 cc. per g. of sample), and extd. over a hot water bath, with a return condenser, for 1 hr. The acetone is poured off and the extn. repeated 3-5 times. It is recommended that once during the repeated extn. the samples be dried of acetone and moistened with a few drops of chloroform or benzene, which must be thoroughly evapd. before acetone extn. is recommenced. When extn. is judged complete, samples are dried at room temp., each package is placed in a separate 25-60-cc. flask (to which is added 10 cc. benzene) the cork stoppered, and the whole shaken for 3 hrs. on a shaking machine. For nephelometric detns., 2 cc. of the benzene ext. is used. To this are added gradually with shaking, 5 cc. methanol contg. 0.02% triethylamine and 1% H_2O, kept at 25°. A turbid mixt. develops which is kept at 25°. Nephelometric detns. are carried out in duplicate after 5 and 60 min. following final prepn. of specimens. A graph converting nephelometric readings into corresponding wt.-values is presented. The results of nephelometric detns. of gutta and rubber in plants vary with the type of material, degree of polymerization, and purification, method of their soln., prepn., the strict adherence to procedures followed, etc. Agreement between duplicate tests by the nephelometric method was closer than by the gravimetric. The method is characterized by a high degree of versatility.

B. S. Levine

21-54

DOMAN, N. G.

Use of radiochromatographic method in investigation of intermediate products of photosynthesis. N. G. Doman. *Trudy Komissii Anal. Khim., Akad. Nauk S.S.S.R., Inst. Geokhim. i Anal. Khim.* 6, 452–60(1955); cf. *C.A.* 47, 4795f.—Some products of photosynthesis were sepd. but not identified. Bean leaves, some raised in media contg. P^{32}, were cut off and quickly placed in a glass chamber contg. air and a known amt. of $C^{14}O_2$. After varying times (½ sec. to several min.) the leaves were rapidly killed by immersion in boiling H_2O or alc. or by immersion in liquid air, cold alc., cold i-C_5H_{12} or freezing Hg. In hot fixation the material was extd. by boiling H_2O for 2 min. and the ext. evapd. *in vacuo* at room temp. In cold fixation the material was dried at −40°. The solvents used for chromatograms were PhOH satd. by H_2O, BuOH-AcOH-H_2O (74–10–50 by vol.), and MeOH-NH_4OH-H_2O (68:12.5:27, d. of NH_4OH–0.922 g./cc.). A chromatogram was placed on x-ray film and the spots on the chromatogram which corresponded to spots on the film were washed with a different solvent to make a new chromatogram. Chromatograms contg. both C^{14} and P^{32} were placed on top of 2 films. The top film showed spots contg. C^{14} or P^{32}, the bottom only spots contg. P^{32}. After practically complete decompn. of P^{32} a new exposure of the chromatogram shows only C^{14} spots. MeOH-NH_4OH solvent sepd. P compds. best. The amt. of P on the chromatogram was small so a known amt. of some P compd. was added before the spots were developed (*loc. cit.*). Modifications of procedure included placing dry sample in a glass clamp at the tip of a dropping funnel contg. solvent, trying circular chromatography, and spraying the chromatogram in the following order with developers. For acids 0.05% bromocresol green in EtOH

DOMAN - N.G.

6425. Pathways of photochemical extracellular reduction of carbon dioxide. N. G. Doman *Biokhimiia*, 1955, 20, 734—739 (A. N. Bakh Inst. Biochem. Acad. Sci. U.S.S.R., Moscow).—The ability of macerated cells of green leaves to fix $^{14}CO_2$ was studied under varying experimental conditions. Under anaerobic conditions (special apparatus described) the cells retained a considerable measure of their original ability to fix CO_2, especially in sunlight and under reducing conditions i.e. in an atmosphere of H_2 and in the presence of cysteine. Chromatograms of the reaction products showed the presence of a number of substances, mainly acids particularly malic acid. It is suggested that the fixation of CO_2 in these experiments is not necessarily due to normal photochemical reactions but may be due to one of the secondary pathways of the normal process. (Russian) A. K. Grzybowski.

DOMAN -N·G

The products of dark fixation of carbon dioxide by plant tissues. N. G. Doman (N. A. Bakh Inst. Biochem., Acad. Sci. U.S.S.R., Moscow). *Biokhimiya* 21, 78–83 (1956).—Leaves of the bean plant were used. Labeled atoms and chromatographic procedures were employed. In the dark CO_2 fixation by the leaves of the bean plant there are formed substances related to the cycle of di- and tricarboxylic acids, such as malic, succinic, fumaric, citric and α-ketoglutaric acids and amino acids such as aspartic and glutamic acids, and alanine as well as amino acid amides, such as asparagine and glutamine, and a series of other unidentified substances. It was found that there exist several distinct mechanisms of dark CO_2 absorption by leaves of green plants, one of which is a labile process and another which operates in the dark as well as in the presence of light. The processes of dark CO_2 fixation have specific characteristics which distinguish them from the process of CO_2 fixation in the presence of light. B. S. Levine

USSR/Plant Physiology. Respiration and Metabolism I-2

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 91313

Author : Dzam N.G.
Inst : Institute for Biochemistry, AS USSR
Title : The Part of Photobiochemical Reactions in the Process of Reducing Sulfates with the Green Leaves of Plants

Orig Pub : Biokhimiya, 1957, 22, No 4, 715-724

Abstract : Two-weeks old bean plants were placed in darkness for 1-2 hours. The roots were then immersed in the diluted (1:10) Knopp's solution containing S^{35}, and left in darkness for 10-20 hours. After this, one leaf was left in the light for 4-10 hours. The other was shaded. The light contributed to the reduction of sulfates and to the accumulation of protein S in the leaf. With this, no correlation was observed between the intensity of the reduced sulfates and the content of soluble sugars in the leaf. Photosynthesis had no effect on the reduction of sulfates since the light accelerated this process and CO_2 was not present in the atmosphere. It is

Card : 1/2

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 91313

believed that the participation of light causes the breaking of the disulfide bond in the molecule of the lipoidic [?] acid resulting in the diradical form which then combines with hydrogen. Further transformation of the lipoidic [?] acid may be linked with the formation of various other S compounds resulting in the accumulation of protein S. The work was carried in the Institute of Biochemistry, Academy of Sciences, USSR. -- O.V. Bogdashevskaya

1. Institut biokhimii im. A. N. Bakha AN SSSR Moskva.

(Plants. - Effect of Light on) (Oxidation-Reduction Reaction) (Sulfates)

VAKLINOVA, S.G.; DOMAN, N.G.; RUBIN, B.A.

Effect of different nitrogen forms on the assimilation products of leaves and their distribution in aerial and underground organs of corn seedlings [with summary in English]. Fiziol.rast. 5 no.6:516-523 N-D '58. (MIRA 11:12)

1. Institut rasteniyevodstva Bolgarskoy AN, Sofiya; Institut biokhimii imeni A.N. Bakha AN SSSR, Moskva.
(Corn (Maize)--Fertilizers and manures)
(Plants, Effect of nitrogen on) (Plants--Assimilation)

SOV/20-122-1-31/44

AUTHORS: Doman, N. G., Khadzhi-Murat, L. N., Demina, S. Ye.

TITLE: The Unity and the Particular Traits in the Way of Carbon Assimilation by Different Plant Species (Yedinstvo i osobennosti puti assimilyatsii ugleroda razlichnymi vidami rasteniy)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 1, pp 111 - 113 (USSR)

ABSTRACT: In a paper worked out under the participation of the author mentioned first in the title (Ref 1) is was proved in the case of 17 plant species from 12 families that especially if they are genetically closely related the ways of their $C^{14}O_2$ in assimilation are very similar. It is true, however, that already at an exposure of one second duration after the $C^{14}O_2$ fixation the specific type of metabolism of the plants concerned has an effect upon the ratio of the forming products. The present investigation has the aim to fill the gaps in the knowledge concerning the concrete mechanism of

Card 1/4

CO_2 assimilation, particularly in the initial stages. There are contradictions with respect to the problem of the nature of the initial products of CO_2 assimilation in connection with photosynthesis (Refs 2-6). Leaves of bean (bot bean), begonia, sugar beet and tobacco were used as experimental objects. They differ greatly with respect to the type of metabolism. The method of investigation is described in reference 7. The results showed that in the case of the shortest exposure of 1 second duration phosphoglyceric acid is formed in the leaves of all experimental plants. The exposure was carried out in the presence of $C^{14}O_2$. In begonia, sugar beet and tobacco almost the total radioactivity was concentrated in this acid. In the bean, however, this acid is formed as a stable initial product of photosynthesis but it changes rapidly to free glyceric acid. In beans sometimes a considerable radioactivity is observed at short exposures in a substance which has so far not been identified (Figs 1,3). In this

case probably an independent fixation of CO_2 is concerned which is in connection with the synthesis of any aromatic substance by means of carboxylation. The results of the investigations show that apart from the unity of the main stages of the assimilation ways of carbon the specificity of metabolism becomes obvious already in the beginning. Already the first product - phosphoglyceric acid (as well as its predecessors) changes according to scheme into at least 3 directions: a)reduction, b) oxidation and c) dephosphorylation. On the whole it is, however, reduced by entering the photosynthetic carbohydrate cycle (Ref 7). Thus, other natural ways are basically not excluded (Refs 9,10). There are 1 figure, 1 table, and 10 references, 7 of which are Soviet.

ASSOCIATION: Institut biokhimii im.A.N.Bakha Akademii nauk SSSR (Institute of Biochemistry imeni A.N.Bakh,AS USSR)

AUTHORS: Doman, N. G., Vaklinova, S. G. SOV/20-122-4-32/57

TITLE: The Effects of Different Nitrogen Forms on the Composition of Labelled Photosynthetic Products in Maize and Phaseolus (Vliyaniye raznykh form azota na sostav mechenykh produktov fotosinteza u kukuruzy i fasoli)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 4, pp 653 - 656 (USSR)

ABSTRACT: Initially, various factors are discussed which influence the distribution of the photosynthetically assimilated carbon (Refs 1-7). Under these conditions, an improved nitrogen nutriment is said to increase the incorporation of carbon in the proteid complex and in the amino acids (Ref 7). Under certain conditions, ammonia nitrogen promotes the formation of the photosynthetic process. Nitrate nitrogen, however, always does so (Ref 8). Therefore, the authors have supposed that the nutrition of the plant with nitrate (oxidized and ammonia (reduced) nitrogen) essentially affects the formation of photosynthetic products (also of intermediates), as was proved for chlorophyll (Ref 8). In

Card 1/4

order to clarify this question, leaves of 10-15 day old maize and phaseolus-plants were exposed in an atmosphere containing C^{14} for 1,5 and 10 minutes (method according to reference 9). The leaves were from plants which were cultivated either with nitrate - or ammonia nitrogen or without nitrogen. From the results in table 1 it is seen that the highest portion of radioactivity in the maize leaves is in the fraction soluble in alcohol. The alcohol-insoluble portion is barely 1-5% and increases with prolonged exposure. In the phaseolus, however, the insoluble portion is 24% of the total activity. This difference is due to the higher amount of proteins built up in the legumes, most of these proteins being insoluble in 80% alcohol. The highest amount of compounds which are insoluble in alcohol is found in the leaves of plants brought up without nitrogen, with an exposure of 5 and 10 minutes. Here, starch is produced in higher quantities (Refs 11,12). From table 1 it is seen that the nitrogen forms exert no significant influence on the ratio of the radioactivity

of all the compounds, soluble and insoluble in alcohol. The experimental results, however, show that the nutrition of plants with various nitrogen forms increases the radioactivity of the free amino acids. The findings further prove that the nutrition of plants with various nitrogen forms affects the method of carbon assimilation by producing distinct differences in the composition of labelled photosynthetic products. Further communications on character and cause of these differences will follow. There are 1 figure, 3 tables, and 17 references, 15 of which are Soviet.

PRESENTED: July 23, 1958, by A.I.Oparin, Member, Academy of Sciences, USSR

SUBMITTED: July 15, 1958

The Effects of Different Nitrogen Forms on the Composition of Labelled Photosynthetic Products in Maize and Phaseolus

SOV/20-122-4-32/57

Card 4/4

DOMAN, N.G.

"Investigating the Nature of Early Products of Photosynthesis."
Paper submitted for the Int'l Botanical Congress, Montreal, Canada, 19-29 Aug 1959.

A.N. Bakh Institute of Biochemistry, Academy of Sciences U.S.S.R., Moscow.

DOMAN, N.G.

Relation between photosynthesis and respiration in plants [with summary in English]. Biokhimiia 24 no.1:19-24 Ja-F '59.
(MIRA 12:4)

1. Institute of Biochemistry, Academy of Sciences of the U.S.S.R., Moscow.
(PLANTS--RESPIRATION) (PHOTOSYNTHESIS)

DOMAN, N.G.; SHKOL'NIK, R.Ya.

Conversion of radiocarbon-labled sedoheptulose in kidney bean, tobacco and Sedum spectabile leaves. Biokhimiia 24 no.2:187-191 Mr-Ap '59 (MIRA 12:7)

1. Institute of Biochemistry, Academy of Sciences of the U.S.S.R., Moscow.

(MONOSACCHARIDES, metab.
sedoheptulose conversion in bean, tobacco & Sedum spectabile leaves, radiocarbon studies (Rus))

SHKOL'NIK, R.Ya.; DOMAN, N.G.

Transformations of C^{14}-labeled glyceric acid in string bean leaves. Biokhimiia 24 no.5:899-903 S-O '59. (MIRA 13:2)

1. Institut biokhimii im. A.N. Bakha Akademii nauk SSSR, Moskva.
(GLYCERIC ACID) (PLANTS--METABOLISM)

SHKOL'NIK, R.Ya.; DOMAN, N.G.

Paper chromatographic fractionization of metabolites. Biokhimiia 25 no.2:276-281 Mr-Ap '60. (MIRA 14:5)

1. Institut biokhimii im. A.N.Bakha Akademii nauk SSSR, Moskva.
(PAPER CHROMATOGRAPHY) (METABOLISM)

ROMANOVA, A.K.; DOMAN, N.G.

Fixation products of labeled carbon dioxide discovered in hydrogen bacteria during the process of chemosynthesis. Mikrobiologiia 29 no.6:795-801 N-D '60. (MIRA 14:1)

1. Institut biokhimii imeni A.N.Bakha AN SSSR.
(BACTERIA, HYDROGEN) (CARBON DIOXIDE)

DOMAN, N. G., ROMANOVA, A. K. (USSR)

The Path of Carbon in Chemosynthesis.

reprot presented at the 5th Int'l. Biochemistry Congress, Moscow, 10-16 Aug. 1961

DOMAN, N. G.

USSR

BOYCHENKO, Ye. A. Dr. - "Chloroplast Enzymes Participating in CO_2 Fixation" (Session C)

DOMAN, N. A., Dr., Institute of Biochemistry, imeni A. N. BAKH, USSR Academy of Sciences - "Primary Products of CO_2 Assimilation in Photosynthesis" (Session D)

YEVSTIGNEYEV, V. B., Dr. - "Photosensibilization of Chlorophyll Under Heterogeneous Conditions" (Session B)

KRASNOVSKIY, A. A., Institute of Biochemistry, imeni A. N. BAKH, USSR Academy of Sciences - "The Nature of Chlorophyll under Heterogeneous Conditions" (Session B)

NICHIPOROVICH, A. A., Dr., Institute of Plant Physiology, imeni K. A. TIMIRYAZEV, USSR Academy of Sciences - "Ways of Carbon and Nitrogen in Photosynthesis" (Session D)

SAPOZHNIKOV, D. I., Institute of Botany, imeni V. L. KOMAROV, USSR Academy of Sciences - "Participation of Carotenoids in Reactions of Photosynthesis" (Session C)

ZALENSKIY, O. V., Dr., Institute of Botany, imeni V. L. KOMAROV, USSR Academy of Sciences - "Relation between Photosynthesis and Respiration" (Session D)

Report to be presented at the 5th Int'l Congress of Biochemistry, Moscow, USSR, 1-10 Aug 61.

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(METABOLISM)

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(BACTERIOLOGY--CULTURE AND CULTURE MEDIA)
(CARBON DIOXIDE)

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