

01:13:40, 3 7.

PARKHOD'KO, A.P.; MILITARY 3 5

Development of the sugar industry of Cherkassy Province
in the post-October period. Sakh.prom. 31 no.3:7-10 Ag '57.
(MLRA 10:8)

1. Cherkasskiy sakhsvoklotrest.
(Cherkassy Province--Sugar industry)

MILIRUD, B.T.; PARKHOD'KO, A.P.

Prospects for the development of the sugar industry in Cherkassy
Province. Sakh. prom. 32 no.4:5-7 Ap '58. (MIRA 11:6)

1. Cherkasskiy sakhsveklotrest.
(Cherkassy Province--Sugar industry)

MILIRUD, B.T.

Regulating the assignment of factory workers. Sakh. prom. 33
no.4:55-56 Ap '59. (MIRA 12:6)

1. Cherkasskiy sakhsveklotrud.
(Sugar industry)

STEPANENKO, I.D.; MILIRUD, B.T.; PARKHOD'KO, A.P.

Using new methods in organizing the repairing and remodeling of
sugar factories. Sakh.prom. 33 no.6:45-48 Je '59.
(MIRA 12:8)

1. Cherkasskiy sakhsveklotrest.
(Sugar industry--Equipment and supplies)

PARKHOD'KO A.P., MILIRUD, B.S.

Sugar industry of the Cherkassy Province in the second year of
the seven-year plan. Sakh.prom. 34 no.7:12-16 J1 '60.

(MIRA 13:7)

1. Cherkasskiy sakhveklotrest.
(Cherkassy Province--Sugar industry)

PARKHOD'KO, A.P.; MILIRUD, B.T.

Let's open the way for new developments. Sakh. prom. 37 no.3:
1-5 Mr '63. (MIRA 16:4)

1. Cherkasskiy gosudarstvennyy trest po vyrashchivaniyu sakharnoy
svekly.

(Sugar industry)

MILIRUD, B.T.

The future belongs to the "collective" wage system. Sakh.prom. 38 no,1:
9-11 Ja '64. (MIRA 17:2)

1. Cherkasskiy sveklosakharnyy trest.

PARKHOD'KO, A.P.; MILIRUD, B.T.

State of the sugar industry in the Cherkassy Province in the past
and today. Sakh.prom. 38 no.3:18-22 Mr '64. (MIRA 17:4)

1. Cherkasskiy sakharnyy trest.

ARAMBASIC, Bozidar, Prifm.dr; JERIC, Sonja, dr; PAVLOVIC, Jovan, dr;
PERISIC, Zivojin, dr; ILIC, Lazar, dr; KECMANOVIC, Miodir, dr;
MILISAVLJEVIC, Anica, dr.

Problem of infectious mononucleosis of the pseudodiphtheric type.
Srpski arh.celok.lek. 77 no.12:1561-1573 Dec.54.

1. Klinika za infektivne bolesti Medicinskog fakulteta u Beogradu.
Upravnik: akademi prof.dr Kosta Todorovic.
(INFECTIOUS MONONUCLEOSIS, differential diagnosis,
pseudodiphtheric type)

MILISAVLJEVIC, B.; KASTRATOVIC, H.

Smoke screens for objects in the rear. p. 52. VOJNI GLASNIK.
(Jugoslavenska narodna armija) Beograd.

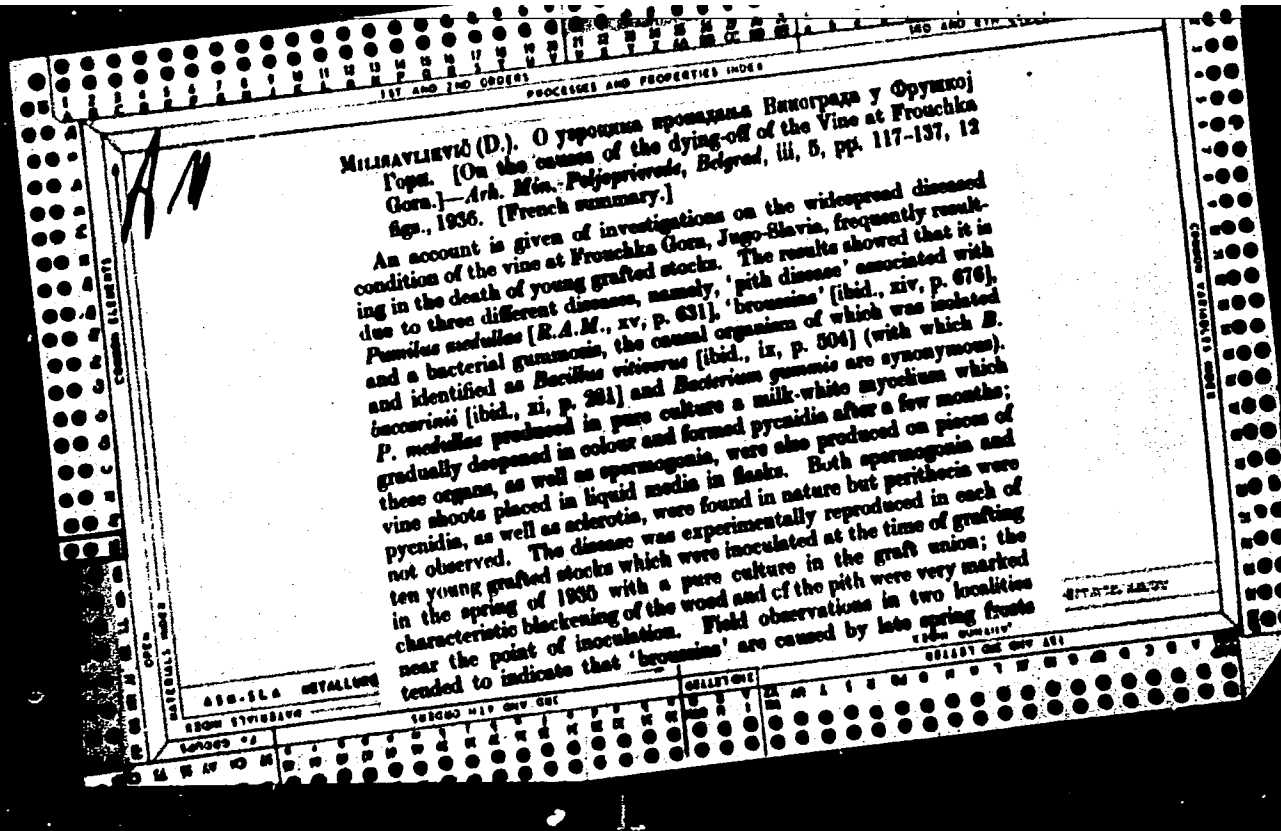
Vol. 9, No. 6, June 1955

SOURCE: East European Accessions List, (EEAL), Library of
Congress, Vol. 4, No. 12, December 1955

STOJSIC, M., dr, doc.; KOSTIC, Z., dr; PUTNIK, Lj., dr; VOLJEVICA, C., dr;
BAROS, T., dr; MILISAVLJEVIC, D., dr; LJUBUNCIC, L., dr; TERZIC, N. dr;
GOLUB, B., dr.

Enteroviral paralysis. Cases observed during 1960 in the Serajevo
Infectious Hospital and in the infectious ward of the Mostar hospital.
Med. glasn. 15 no.11:375-380 N '61.

(POLIOMYELITIS epidemiol)



ation experiments with *B. vitivorus* on a number of vine cuttings. In 1965 resulted in the vessels becoming filled with gum and developing tyloses, and in the cuttings striking very poorly and producing malformed, chlorotic shoots. The organism was re-isolated from the infected plants. Occasionally two or all three of these diseases were observed on the same vine-stocks, a fact which has hitherto helped to obscure the real causes of the condition.

MILISAVLJEVIĆ, Dragoslav.

Protection of vineyards against downy mildew. Beograd, Zadrzna knjiga, 1951. 42 p.
(Prakticna poljoprivredna knjiga)

MILICAVLSEVIC, D.

"Calcium Phytin As A Means to Remove Iron from Wires", P. 37, (SILICAVLSEVIC, D.),
Vol. 2, No. 3, March 1954, Belgrade, Yugoslavia)

SO: Monthly List of East European Accessions (MEAL), LC, Vol. 4, No. 3,
March 1955, Uncl.

MILISAVLJEVICH, D.

YUGOSLAVIA / Microbiology. Technical Microbiology. F-3

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72027.

Author : Milisavljevich, Dragoslav.

Inst : Not given.

Title : Problems of Modern Biology in Wineries.

Orig Pub: Poljopr. Vojvod., 1957, 5, No 5, 1-13.

Abstract: No abstract.

Card 1/1

26

YUGOSLAVIA/ Chemical Technology - Chemical Products and Their Application. Fermenting Industry. H-27

Abs Jour : Ref Zhur - Khimiya, No 17, 1958, 58999

Author : Milisavljevic Dragoslav

Inst : -

Title : Action of Penicillium expansum LINK on Grapes and the Quality of the Wine.

Orig Pub : Poljopr. Vojvod., 1957, 5, No 6, 40-47

Abstract : Penicillium expansum breaks down the skin of the grape, which leads to a considerable evaporation of water. Under the influence of P. expansum the content of sugar, tartaric acid, and nitrous substances is reduced in the grape; glycerine in considerable quantity appears. Wine from grapes affected by P. expansum is noted for a greater content of tannic acids, greater transparency, and a comparatively more bitter taste.

Card 1/1

- 76 -

MILISA

COUNTRY : Yugoslavia 11-27
CATEGORY :
AUTHOR : Milisavljevic, D.
ABS. JOUR. : RZKhim., No. 1959, No. 72922
INST. :
TITLE : Experiments on Making of Red Wine from
Grapes of "Prokupka" Variety
ORIG. PUB. : Arhiv poljapr. nauke, 1958, 11, No 33, 3-23
ABSTRACT : Laboratory experiments were conducted on
making red wine from grapes of the "Prokupka" variety which
is common in Serbia. It is shown that production of quality
wine from this variety necessitates separation of the stems
(except in cases of berries that are not fully ripe); a
maceration of the pulp in the must for 4-5 days following
beginning of fermentation (if berries are not fully ripe
the ratio of must to pulp should be decreased); addition of
SO₂ (before fermentation starts) at a rate of 10-30 g per
hectaliter; fermentation at about 30° (at 35° if berries
are not fully ripe), with aeration only up to the beginning
of fermentation; heating of grapes at 65° before fermentation.
N. Prostoseraova.
CARD: 1/1
§ 7

STOJSIC, M., doc. dr.; PUTNIK, Lj., dr.; KOSTIC, Z., dr.; MILISAVLJEVIC, M.,
dr.; KAPIDZIC, M., dr.

Whooping cough in an infectious disease clinic in Sarajevo during the
past 3 years. Med. arh. 16 no.3:35-48 My-Je '62.

1. Infektivna klinika Medicinskog fakulteta u Sarajevu (Sef: prof.
dr Blagoje Dordovic).

(WHOOPING COUGH statist)

MILISAVLJEVIC, Milos

Criteria for the formation of economic units in the postal,
telegraph, and telephone collectives, and their mutual relations.
PTT Zajed 4 no.3:41-43 My-Je '62.

MILISAVLJEVIC, M.

"The problem of protecting artillery igniters."

p. 669 (Vojno-Tehnicki Glasnik) Vol. 5, no. 9, Sept. 1957
Belgrade, Yugoslavia

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

MIJISAVLJEVIC, R.

MIJISAVLJEVIC, R. The 1956 Railroad Year; railroads and European integration. p. 22.

Vol. 12, No. 11, Nov. 1956.

ZELEZNICE

TECHNOLOGY

Beograd, Yugoslavia

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

MILISAVLJEVIC, Radivoje, ing.

Measurements on cables. Telekomunikacije 9 no.3:25-31 JI '60.
(EEAI 10:1)

(Radio) (Voltmeter)

MILISAVLJEVIC, Radivoje, ing. (Beograd)

Regulating feeder conductors loaded with accorded antennas. Tele-
komunikacije 9 no.4:16-24 0 '60. (EEAI 10:3)
(Radio) (Antennas (Electronics))

MILISAVLJEVIC, Radivoje, -ins.

The multiple-channeled radiotelephonic systems for the transmission of information in the overseas telecommunication. Telekomunikacije 11 no.2:7-19 Ap '62.

MILISIC, Anton, inz.

Modern cadastre. Geod list 17 no. 4/6: 160-161 Ap-Je
'63.

L 02502-67 EWT(1) RO

ACC NR: AP6016806

(A)

SOURCE CODE: UR/0018/66/000/001/0091/0094

AUTHOR: Levykin, V. (Lieutenant colonel); Milisov, V. (Lieutenant colonel) 23
B

ORG: none

TITLE: Entrenchments must be constructed rapidly even in winter

SOURCE: Voyenny vestnik, no. 1, 1966, 91-94

TOPIC TAGS: military engineering, military tactic

ABSTRACT: [Levykin] Shelter, dugouts, and trenches for personnel, and trenches and excavations for military, special, and transport purposes provide protection in winter as well as in other seasons from all destructive effects of nuclear explosions, conventional means of destruction and chemical warfare. However, construction of these works under winter conditions involves a number of special features with which commanders should be acquainted. For example, if the depth of the frozen ground does not exceed 10-15 cm, it is better to break the crust with explosives or with entrenching tools, and then to proceed with the excavation. When the snow cover is more than 80 cm, and the layer of frozen ground is very thick, trenches and communications can be

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L 02502-67

ACC NR: AP6016806

constructed directly in the snow. [Milisov] The author describes a method of excavating trenches in frozen ground. He first describes an instrument for testing the level of the ground water, which is necessary before excavation of trenches. A bulldozer is then used to remove the surface snow, and parallel trenches are dug with a special excavating machine. The procedure and the finished trenches are illustrated in a series of figures. Origl art. has: 4 figures. 0

SUB CODE: 15/ SUBM DATE: none

Card 2/2 *da*

MILITAREV, Yu. M., Physician Cand. Med. Sci.

Dissertation: "Surgical Anatomy of the Arteries of an Amputation Stump." Second Moscow State Medical Inst., imeni I. V. Stalin, 5 May 47.

SO: Vechernyaya Moskva, May, 1947 (Project #17836)

MILITARYEV, Yu. M.

Use of penicillin in the treatment of hidradenitis, furuncles
and lymphadenitis. Feldsher & akush. no.6:34-38 June 1951.
(GIML 21:1)

1. Candidate Medical Sciences.

MILITAREV, Yu. M.

"Thrombosis and prolapse of hemorrhoidal varices.," Fel'd i akash.,
No. 12, 1951.

Cand. Med. Sci.

MILITAREV, YU. M.

Stomach

Gastric hemorrhages and their therapy. Fel'd. i akush. no. 4, 1952

Monthly List of Russian Accessions, Library of Congress, August 1952. UNCLASSIFIED.

MILITAREV, YU. M.

Hemorrhage

Gastric hemorrhages and their therapy. Fel'd. i akush. no. 5, 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952. UNCLASSIFIED.

MILITAREV, Yu. M.

"Thrombophlebitis of the shin and its therapy," Fel'd i Akush.,
No. 6, 1952.

Cand. Med. Sci.

MILITAREV, Yu.M.

~~HERNIAS OF THE LINEA ALBA. FEL'DSHER & AKUSH. NO. 12:27-29 DEC~~
Hernias of the linea alba. Fel'dsher & akush. no. 12:27-29 Dec
1952. (CLML 23:3)

1. Candidate Medical Sciences.

MILITAREV, Yu.M.

Acute cholecystitis. Fel'dsher & akush. no. 2:20-26 Feb 1953.
(GIML 24:2)

1. Candidate Medical Sciences. 2. Moscow.

MILITAREV, Yu.M., kandidat meditsinskikh nauk (Moscow).

General symptomatology and diagnosis of acute abdomen. Fel'd.1
akush. no.2:24-32 F '54. (MLRA 7:2)

(Abdomen--Diseases)

MILITAREV, Yu.M., kandidat meditsinskikh nauk (Moscow).

Cancer of the rectum. Fel'd.i akush. no.3:33-37 Mr '54.

(MIRA 7:3)

(Rectum--Cancer)

MILITARNY, Yu.M., kandidat meditsinskikh nauk (Moskva)

Prevention and therapy of goiter. Vol'd. 1 akush. no.7:18-25
JI '54. (MLRA 7:7)

(GOITER
*prev. & ther.)

MILITAREV, Yu.M., kandidat meditsinskikh nauk

Clinical significance of anatomosurgical characteristics of
arteries of amputation stumps. Khirurgiia no.9:42-47 S '54.

(MLRA 7:12)

1. Iz kafedry operativnoy khirurgii s topograficheskoy anatomiyei
II Moskovskogo meditsinskogo instituta imeni I.V.Stalina.
(AMPUTATION STUMPS, blood supply,
arteries)

MILITAREV, Yuriy Mikhaylovich, kand.med.nauk; POPOVA, G.F., red.;
SENCHILO, K.K., tekhn.red.

[Hemorrhoids and their treatment] Gemorroj i ego lechenie.
Moskva, Gos.izd-vo med.lit-ry, 1958. 31 p. (MIEA 13:6)
(HEMORRHOIDS)

MILITAREV, Yu.M. (Moskva)

Hypothermia as a method for treating experimental peritonitis. Pat. fiziol. i eksp.terap. 3 no.5:62-65 S-0 '59. (MIRA 13:3)

1. Iz kafedry khirurgicheskikh bolezney (zaveduyushchiy - prof. P.L. Sel'tsovskiy) i kafedry patologicheskoy fiziologii (zaveduyushchiy - chlen-korrespondent ANM SSSR prof. N.A. Fedorov) Moskovskogo meditsinskogo stomatologicheskogo instituta.

(HYPOTHERMIA, INDUCED ther.)

(PERITONITIS ther.)

MILITAREV, Yuriy Mikhaylovich, kand. med. nauk; POPOVA, G.F., red.;
ZUYEVA, N.K., tekhn. red.

[Hernias; their prevention and treatment] Gryzhi; ikh pred-
prezhdenie i lechenie. Moskva, Gos. izd-vo lit-ry Medgiz, 1960.
21 p. (MIRA 14:7)

(HERNIA)

MILITAREV, Yu.M., kand.med.nauk

Neurovegetative block and hormone therapy in various forms of
suppurative peritonitis. Vest.khir. 85 no.10:13-17 0 '60.

(MIRA 13 :12)

1. Is khirurgicheskoy kliniki (sav. - prof. P.L. Sel'tsovskiy)
Moskovskogo meditsinskogo stomatologicheskogo instituta.
(PERITONITIS) (ACTH) (CORTISONE) (LOCAL ANESTHESIA)

MILITAREV. Yu.M., kand. med. nauk

Local injections of hydrocortisone in the treatment of metabolic lesions of the locomotor apparatus. Sov. med. 28 no.1:107-110 Ja '65. (MIRA 18:5)

1. Tsentral'naya Kirovskaya poliklinika (glavnyy vrach E.Ye. Inassaridze), Moskva.

MILITAROVA, Ye.S.

Hypertension. Med.vestn., Moskva no.2:3-5 Feb 51. (CIWL 20:7)

1. Author is a physician.

EFTIME, A., ing.; MILITARU, Al., geofizician; STANESCU, E., ing.,
candidat in stiinta tehnica

Use of radioactive isotopes in the control of packing in
earth weirs. Hidrotehnica 7 no.3:82-85 Mr '62.

MILITARU, Gh., fiz.

Measuring devices for rotation speed; speed counters. Metro-
logia apl 9 no. 4:154-162 J1-Ag '62

REEDARD, Nicolae

High production, optimum conditions of work. Constr Sic 17 no.782:
3 5 Ja '65.

1. Chairman of the Committee of the Trade Union of the "Telesjen"
Porceni Factory of Tanned Board and Mineral Wadding.

MILITARU, PAUL

Militaru, Paul Transportul, distributia si utilizarea energiei electrice.
(Bucuresti) Editura Tehnica, 1951 p.441 (Transportation, distribution,
and utilization of electric energy)

SP: East European, IC, Vol. 2, No. 12, Dec. 1953

MILITARU, P.

Special slide rules for the determination of the inductivity and capacity of aerial electric lines. p. 88

Vol 2, no. 2, Feb. 1954

ENERGETICA

Bucuresti

Source: East European Accessions List (EEAL), LC, Vol. 5, No 2
Feb. 1956

MILITARU, P

TECHNOLOGY

MILITARU, P. Systems of high-tension power distribution in rural electrification. p. 468
Vol. 6, no. 10, Oct. 1958

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 3,
March 1959, Unclass.

MILITARU, P.

TECHNOLOGY

PERIODICAL: ELETRONICA, Vol. 6, no. 11, Nov. 1958

MILITARU, P. Mounting of the nightlighting installations of the Republic Stadium of Bucharest, and first results of its exploitation. p. 416

MO_nthly List of East European Accession (EEAI) LC Vol. 9, No. 4
April 1959, U_nclass

VICOL, Pavel, ing.; MILITARU, Paul, ing.; TENCU, Constantin, ing.;
LAZARESCU, Stelian, ing.

Crossing the Danube River in Rumania by means of subfluvial cables.
Energetica Rum 9 no.5:191-209 My '61.

GROZA, L., ing.; MILITARU, P., conf. ing.

Works of the 18th Session of the International Conference of
Large Electric Systems. Energetica Rum 9 no.8:297-311 Ag
'61.

~~MILITARU~~ Paul, ing.; PETRESCU, Constantin; MARINESCU, Cristian, ing.
(Bucharest)

The planning of the Bicaș-Sîngeorgiu-Ludus 220 kv. electric line. Energetica Rum 10 no.5:181-189 My '62.

1. Inginer sef la Institutul de studii si proiectari energetice (for Militaru). 2. Sef de atelier la Institutul de studii si proiectari energetice (for Petrescu). 3. Inginer proiectant sef la Institutul de studii si proiectari energetice (for Marinescu).

CONSTANTINESCU, E., ing.; MILITARU, P., ing.; GROZA, L., ing.; GROF. F., ing.
(R.S. Cehoslovaca); NOVAK, I., ing. (R.S. Cehoslovaca)

Interconnection at 400 kv. between the electric power systems of
Rumania and Czechoslovakia. Energetica Rum 11 no.3:130-137 Mr '63.

MILITARU, Paul, ing.

Determination of luminous flux in luminaires by graphic methods
and mechanical devices. Energetica Rum 11 no.4:142-150 Ap '63.

1. Presedintele Comitetului national romin CIE.

MILITARU, P.

Contributions to the calculation of three-phase networks with single-phase loads. Bul Inst Politeh 25 no.3:85-112 My-Je '63.

1. Chaire de Centrales electriques, Institut Polytechnique de Bucarest.

MILITEANU, T.; FRIEDMAN, A.

Certain terms erroneously used: gripper or loom shuttle? p. 143.

Vol. 6, no. 4, Apr. 1955
INDUSTRIA TEXTILA
Eucuresti, Rumania

Source: East European Accession List. Library of Congress
Vol. 5, No. 8, August 1956

MILITESCU, Gh.

Results of the economic exploitation of the Thermoelectric-Power
Plants at Paroseni in 1960. Energetica Rum 8 no.7:326-328 J1 '60.

MILITESCU, Gh. ing.; CAPATINA, V., ing.

Supervising the functioning of turbine axial bearings.
Energetica Rum 11 no.6:276-278 Je '63.

MILITESCU, L.

Seasonal variations of the nutrients in glass plots of the agricultural experimental station Moara Damneasca (Bucharest region). L. Militescu (Agr. Exptl. Sta., Bucharest, Romania). *Comun. acad. rep. populare Romine* 5, 1359-66 (1955).—Plots with grass and with barley were compared over 2 years, the results being presented in the form of tables for humus, NO_3^- , NH_4^+ , P_2O_5 , Na_2O , K_2O , Ca, and pH. The following conclusions are drawn: the grasses increase the fertility of the soil, by accumulating therein NH_4^+ , NO_3^- , P_2O_5 , sol. bases, and humus. The amount of all these will vary over the same time and with the same plant cover, depending upon the conditions of climate; the amt. of such nutrients is highest in spring, lowest in summer, thus, e.g. NO_3^- reaches 20.2 kg./ha. in spring and drops to 2.5 kg./ha. in the summer. It was found over the 2-yr. period that the mobilization of P_2O_5 and of NO_3^- increases, whereas the one of NH_4^+ decreases. W. J.

MILITESCU, LIDIA

RUMANIA/Cultivated Plants - Grains.

M-2

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91608

Author : Serbanescu, N., Margineanu, M., Boldea, Elena, Militescu, Lidia.

Inst : Communist Academy of the Rumanian People's Republic

Title : The Influence of Preceding Crops on the Productivity and Quality of Winter Wheat on the Brown-Reddish Forest Soil of Bucharest Region.

Orig Pub : Commun. Acad. RFR, 1957, 7, No 12, 1059-1064.

Abstract : Data from 1955-1956 of the Moara Domnaske Agricultural Experimental Base. The highest yield was obtained after 2 - 3 years sowing of perennial grass. The lowest - after corn. No noticeable difference was observed in the quality of the wheat.

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BILTEANU, Gheorghe; MILITESCU, L.

Behavior of different oat plants to the relations between the
nutritive elements of nitrogen, phosphorus, potassium. Studii
cerc biol veget 12 no.2:217-237 '60. (EEAI 9:11)
(Oats) (Nitrogen) (Phosphorus)
(Potassium)

MILITESCU, Livia; GRUIA, Em.; HERA, Cr.

Influence of the previous culture on the nutrient contents of the soil under the culture of maize. Comunicarile AR 11 no.5:587-591 My '61.

1. Comunicare prezentata de Amilcar Vasiliu, membru corespondent al Academiei R.P.R.

SANDOIU, D.; SLUSANSCHI, H.; RAIU, Ileana; MILITESCU, Livia

Influence of the experimental soil dryness in various vegetation stages upon the production and accumulation of chemical components in barley. Studii cerc. biol veget 13 no.4:449-466. '61.

1. Comunicare prezentata de A. Vasiliu, membru corespondent al Academiei R.P.R.

MILITINEAU, I.

MILITINEAU, I. The elaboration of standards. p. 1.
Activities of the technical committees of the International Organization
for Standardization at the session in Leningrad, Aug. 1956. p. 4.

Vol. 8, No. 9, Sept. 1956.

STANDARI ZAREA

TECHNOLOGY

Bucharesti, Rumania

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

MILITINSKAYA, M.S., assistant

Some characteristics of the fleece of hybrid sheep (coarse-wool X
French Merino). Sbor. nauch. trud. Ivan. sel'khoz. Inst.
no.19:108-115 '62. (MIRA 17:1)

1. Kafedra razvedeniya sel'skokhozyaystvennykh zhiivotnykh (zav. -
prof. V.Ye. Al'tshuler) Ivanovskogo sel'skokhozyaystvennogo
instituta.

CHERNOV, Ivan Mikhaylovich; MILITSA, Valentina Borisovna; VITVITSKIY,
M. [Vitvits'kyi, M.], red.; GRIF, M. [Griff, M.], tekhn.red.

[One owner] Odyn gospodar. L'viv, Knyzhkovo-zhurnal'ne vyd-vo,
1958. 23 p. (MIRA 13:2)
(Agricultural machinery)

MILITSIN, G.K.

7

PHASE I BOOK EXPLOITATION

SOV/5976

Shklennik, Ya. I., A. V. Baranov, V. N. Ivanov, S. A. Kazennoy, B. S. Kurchman,
N. N. Lyashchenko, R. A. Marulidi, G. K. Militsin, V. A. Ozerov, A. I.
Sitnichenko, M. Ya. Telis, and M. L. Khenkin

Lit'ye po vyplavlyayemykh modelyam (Investment Casting) [Leningrad] Mashgiz
[1961] 455 p. (Series: Inzhenernyye monografii po litoynomu proizvodstvu)
Errata slip inserted. 8000 copies printed.

Eds. (Title page): Ya. I. Shklennik and V. A. Ozerova; Reviewers: N. D. Titov,
Candidate of Technical Sciences, and A. I. Klauzon, Engineer; Ed.: Yu. L. Markis,
Engineer; Tech. Eds.: A. Ya. Tikhonov, Z. I. Chernova and V. D. El'kind; Man-
aging Ed. for Literature on Hot-Working of Metals: S. Ya. Golwin, Engineer.

PURPOSE: This book is intended for engineering and technical personnel in the
metalworking industry and for scientific research workers. It may also be used
by students specializing in foundry work.

COVERAGE: The book reviews the most important problems in investment casting.
Among the topics considered are the following: mechanical properties of castings;

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Investment Casting

SOV/5976

the manufacture of castings; precision surface quality; materials and methods of making patterns and molds; the melting of metals and alloys; pouring, cleaning, heat treatment, and inspection of castings; economic aspects in the production of castings; organization of production; and modern concepts relating to processes taking place in the manufacture of investment castings. No personalities are mentioned. There are 180 references, mostly Soviet.

TABLE OF CONTENTS:

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Ch. I. Designing Cast Parts	
Properties of castings	12
Dimensional precision	13
Surface quality	13
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Card 2/28

SARIKYAN, S.Ya., CHECHEL'NITSKAYA, S.M., BAYGULOVA, S.A., LATYPOVA, G.Kh.
MILITSINA, A.N.

The problem of correct organization of malaria control in the
Tatar A.S.S.R. [with summary in English]. Med.paraz. i paraz.bol.
27 no.3:304-309 My-Je '58 (MIRA 11:7)

1. Iz sektora bor'by z parazitarnymi boleznyami pri stroitel'stve
gidrotekhnicheskikh i meliorativnykh sooruzheniy Instituta malyarii,
meditsinskoj parazitologii i gel'mintologii Ministerstva zdravookhra-
neniya SSSR (dir. instituta - prof. P.G. Sergiyev, zav. sektorom -
prof. V.N. Bekhlemishev) i Kazanskoy gorodskoy sanitarno-epidemiologi-
cheskoj stantsii (glavnyy vrach TS.D. Matt).

(MALARIA, prevention and control
in Russia (Rus))

ACCESSION NR: AT4042426

S/0000/63/000/000/0075/0081

AUTHOR: Materova, Ye. A., Belinskaya, F. A., Militsina, E. A.

TITLE: Some of the electrochemical properties of ion exchange membranes

SOURCE: Respublikanskoye nauchno-tekhnicheskoye soveshchaniye po ionnomu obmenu. Alma-Ata, 1962, Teoriya i praktika ionnogo obmena (Theory and practice of ion exchange); trudy* soveshchaniya. Alma-Ata, Izd-vo An KazSSR, 1963, 75-81

TOPIC TAGS: ion exchange membrane, ion exchange resin, polymer film, electro-chemistry, membrane potential, resorcinol exchange resin, pH measurement, galvanic cell

ABSTRACT: The difference between the membrano potentials of various ion exchange disphragms prepared form sulfocarboxyl resins, hydroxyl cation exchange resins, basic anion exchange resins and some inorganic ionites was investigated at the ion exchange laboratory of Leningrad University. The membranes were prepared in the form of small disks either by pressing a fine powder with polystyrene, polyethylene or polymethylmethacrylate as the binders, or by molding a binder with the dispersed powder of an exchange resin

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ACCESSION NR: AT4042426

from an organic solvent. Technical ion exchange membranes prepared in the laboratory of Ye. B. Trostyanskaya at MkhTI and at the NIIPM were also studied. The galvanic cells $Ag | AgCl, M^+Cl |$ ion exchange membrane $| M^{++}Cl, AgCl | Ag$ and $Ag | AgCl, M^+Cl |$ ion exchanges membrane $| M^{++}Cl, sat'd. KCl, Hg_2Cl_2 | Hg$ were used to measure the membrane potentials in a variety of electrolytes. Despite a relatively low selectivity with respect to hydrogen ions, membrane electrodes were found to match the glass electrode in measuring pH in aggressive media. Thus, a resorcinol cation exchange resin was able to measure the pH of 0.015 - 19.7 N HF. The investigation of ion exchange resin membrane potentials shows them to be an important characteristic of the chemical and electrochemical properties of ion-exchange materials. "Some of the experimental data were obtained by A. Zub, P. Skablohevskiy and T. I. Rozhanskaya." Orig. art. has: 6 figures, 1 table and 2 equations.

ASSOCIATION: Leningradskiy gosuniversitet im. A. A. Zhdanova (Leningrad State University)

SUBMITTED: 13Nov63

SUB CODE: MT

NO REF SOV: 007

ENCL: 00

OTHER: 000

Card 2/2

MILITSINA, N. V.

River travelers. Zdorov'e 8 no.7:20 J1 '62. (MIRA 15:7)

(BOATS AND BOATING)

MILITSKOVA Ye. A.

Nov. 51

USSR/Chemistry - Organophosphorus
Compounds

"Action of Halogen-Substituted Ethers on the Sodium Salts of Di-b-Alkoxyethylphosphorus
Acids," V. S. Abramov, Ye A. Militskova, Lab of Org Chem, Kazan' State U imeni V. I.
Ul'yanov-Lenin

"Zhur Obshch Khim" Vol XXI, No 11, pp 2011-2016

Prepd di-B-methoxy- and di-Bethoxyethylphosphorus acids. Prepd their Na salts by action
of metallic Na. Reaction of Na salts with $\text{BrCH}_2\text{OCH}_3$, $\text{BrCH}_2\text{OC}_2\text{H}_5$, $\text{BrCH}_2\text{OC}_3\text{H}_7$, $\text{ClCH}_2\text{OC}_2\text{H}_5$
yielded salts of esters of corresponding phosphonic acids. Reaction of Na salts with
 $\text{BrCH}_2\text{OCH}_2\text{Br}$ yielded sym salt of ester of diphosphonic acid. Proposes scheme of reaction

PA 194T48

USSR/Chemistry - Organophosphorus Com- Feb 52
pounds

"Action of Halogen Derivatives on Sodium Di- β -
Methoxyethylphosphite," V. S. Abramov, Ye. A. Mi-
litskova, Lab of Org Chem, Kazan' State U

"Zhur Obshch Khim" Vol XXII, No 2, pp 252-257

Studied action of EtBr, BzCl, BzBr on Na di- β -
methoxyethylphosphite (I). In case of EtBr and
BzCl products were esters of alkylphosphonic acids,
in case of BzBr product was salt of ester. Action
of AcCl and AcBr on I yielded salt of ester. Latter
does not form with 2,4-dinitrophenylhydrazine the

209719

USSR/Chemistry - Organophosphorus Com- Feb 52
pounds (Contd)

corresponding hydrazone. Action of ethylene bro-
mide on I and Na diethylphosphite yielded di-Me
salts of di-Et and di- β -methoxyethyl esters of di-
phosphonoethane and Na salt of Et ester of β -bromo-
ethylphosphonic acid.

209719

MILITSKOVA, Ye. A.

Distr: 4EhJ/4E2c(1)

6

~~State: (U) / (S) (1)~~

Organic glass of increased heat resistance based on copolymerization of methyl methacrylate and methacrylic acid. R. A. Mikhalkova and I. P. Logov. Khim. Nauki i Prom. 2, 603-6 (1967). Copolymers of methyl methacrylate (I) and methacrylic acid, prepd. in the presence of Bz_2O_2 , are more heat-resistant (171-44° than is the polymer of I. The addn. of dibutyl phthalate lowered the heat resistance (137°) and caused the development of cracks. The copolymers are sol. in Me_2CO and slowly swell in dichloroethane.

I. Hencowitz

6
 5-11-67
 2

Handwritten initials and marks, including a large 'M' and a double slash '//', are present below the main text block.

S/191/60/000/003/013/013
B016/B054

AUTHORS: Militakova, Ye. A., Grinevich, K. P., Sokolov, A. D.,
Zyabkin, A. P.

TITLE: Liquid Organosilicon Polymers Used as Lubricants for Molds
in Casting and Molding of Thermoplastics

PERIODICAL: Plasticheskiye massy, 1960, No. 3, pp. 72 - 73

TEXT: The authors report on their experiments concerning the use of liquid organosilicon polymers to lubricate molds for thermoplastics. They used liquids No.3, No.5 β (5L), and ГКЖ-94 (GKZh-94) (polyethyl siloxane), as well as three polymethyl-siloxane liquids (No. 3-3) of different viscosities. These liquids were used as lubricants in processing colorless and filled polystyrene, caprone, polymethyl etrols, methacrylate, and copolymers of methyl methacrylate with styrene. No.5 and GKZh were manually applied to the molds. The latter liquid yielded better results: After a single treatment, it was possible to cast 25-60 pieces of different materials in the mold. No.3 and the polymethyl-siloxane liquids were sprayed onto the molds. An admixture of easily

Card 1/2

Liquid Organosilicon Polymers Used as
Lubricants for Molds in Casting and
Molding of Thermoplastics

S/191/60/000/003/013/013
B016/B054

volatile liquids (mostly of liquid isobutylene) was used to generate pressure. The mixture was filled in the sprayer in a cooled state. Compressed air was used for spraying when the liquid was employed in an organic solvent. Results are tabulated. The use of polysiloxane liquids prevents the adherence of products to molds, cracking of workpieces, and damages when taking them out of the mold. There are 2 figures and 1 table.

Card 2/2

YEZHKOVA, V.S.; MILITSKOVA, Ye.A.; SOKOLOV, A.D.

Use of technical organic glass for lighting and other
materials in the manufacture of light fixtures. Plast.
massy no.4:42-45 '60. (MIRA 13:7)
(Plastics) (Electric light fixtures)

87878

S/191/60/000/005/003/020
B004/B064

15.8105

AUTHORS: Militskova, Ye. A., Sokolov, A. D.

TITLE: A New Heat-resistant Casting Material on the Basis of
Acetobutyrate Cellulose and Polymethyl Acrylate

PERIODICAL: Plasticheskiye massy, 1960, No. 5, pp. 6 - 9

TEXT: The authors aimed at producing casting material from acetobutyrate cellulose and acryl polymers of increased heat resistance. In the introduction, papers are mentioned on the copolymerization of cellulose esters with other polymers. In 1958, the Leningradskiy NIIPP (Leningrad Scientific Research Institute of Plastic Products) produced a new material of acetobutyrate cellulose and nitrile rubber which was nontransparent. Z.A. Rogovin and A. A. Berlin worked in the same direction. Thin-walled acetyl cellulose etherol products of the 2DT-43 (2-DT-43) type were heat-resistant only up to 70 - 80°C. The authors used acetobutyrate cellulose of the Vladimirskiy khimicheskii zavod (Vladimir Chemical Plant) esterified to 38 - 44 % by butyric acid, and combined it by means of extrusion with 6, 12, 20, 30, 40 % by weight of acryl polymers. The combination with polybutyl methacry-

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A New Heat-resistant Casting Material on the
Basis of Acetobutyrate Cellulose and Poly-
methyl Acrylate

S/191/60/000/005/003/020
B004/B064

late did not meet the demands so that further studies were restricted to the vitreous product from acetobutyrate cellulose and polymethyl acrylate. The resulting materials 34-12A (ETs-12A), 34-20A (ETs-20A), and 34-30A (ETs-30A) were of high strength, high heat resistance, and high stability to gasoline and other substances. Automobile parts (headlamp glasses, steering wheels) produced from ETs-20A were stable at 110 - 130°C. Combined polymers MMA (MMA), MA (MA), and 5M (BM) with worse properties were produced by means of suspension polymerization in the presence of isobutyric acid dinitrile from acetobutyrate cellulose and copolymers from acrylic acid esters and methyl methacrylate. There are 3 figures, 2 tables, and 2 Soviet references. X

Card 2/2

S/191/60/000/004/009/015
B016/B058

AUTHORS: Yezhkova, V. S., Militskova, Ye. A., Sokolov, A. D.

TITLE: Application of Organic Glass in Illumination Engineering
and of Other Materials for the Production of Illumination
Devices

PERIODICAL: Plasticheskiye massy, 1960, No. 4, pp. 42-45

TEXT: The authors describe plastic light diffusers of various designs and shapes, as well as colored signal glasses and lamps. They mention the production processes used and discuss in detail the application of organic glass in illumination engineering: Addition of low-molecular polystyrene (molecular weight: 10,000 - 18,000) is recommended for obtaining a uniformly semitransparent opal glass. The manufacturing method of this polystyrene was elaborated at the central laboratory of the Kuskovskiy khimicheskiy zavod (Kuskovo Chemical Plant). A glass of this type with cross-linked structure and increased heat resistance was developed at the "Karbolit" Plant. The thermosetting paste for its manufacture was developed at the НИИПП (Scientific Research Institute of Plastic Products) from

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Application of Organic Glass in Illumination
Engineering and of Other Materials for the
Production of Illumination Devices

S/191/60/000/004/009/015
B016/B058

acrylates and polyfunctional cross-linking agents. Pastes of this type were elaborated at the "Karbolit" Plant on the basis of other formulas (TC-3, TC-4 (TS-3, TS-4)). Products of any color and transparency can be made from these acrylate pastes. They have a strong, glossy surface and withstand temperatures of 120-150°C without changes in shape and warping. Pressed products from TS-3 and TS-4 have a sufficient mechanical strength. They get brittle at room temperature due to a higher content of cross-linking agents, but remain elastic and strong in a heated state. Illuminating devices, light-diffusing ceilings, and signal glasses can be produced from centrifugally cast material. For this purpose the authors recommend polystyrene, the copolymers MC (MS) and MCH (MSN), acetobutyrate cellulose etrol, acetyl cellulose etrol, polypropylene, and other cast materials. Finally, they mention that the newly developed heat-resistant plastics ЭЦ-12-A (ETs-12A) and ЭЦ-30A (ETs-30A) of the "Karbolit" Plant, based on acetobutyrate cellulose and plasticized with polymers, show many advantages (Fig. 3). There are 3 figures and 3 tables. ✓

Card 2/2

DUYEV, A.M.; MILITSKOVA, Ye.A.

Articles made of plastics having a mother-of-pearl appearance.
Plast.massy no.10:27-31 '60. (MIRA 13:12)
(Plastics)

25595

S/191/61/000/008/001/006
B110/B201

15.8000 2209

AUTHOR: Militskova, Ye. A.
TITLE: Stabilization and regulation of the granular dimensions of suspension polymers
PERIODICAL: Plasticheskiye massy, no. 8, 1961, 6 - 11

TEXT: The regulation of the granular dimensions of suspension polymers is as yet insufficiently known. It is shown here that small beads are formed by polyvinyl alcohol (PVA) with acetyl groups displaying high dispersion properties. The author has studied the effect of the neutral copolymer MKM(MKM) of methacrylic acid and methyl methacrylate upon the granulometric composition of a polymethyl methacrylate suspension of the type \mathcal{M} -1(L-1) and suspension copolymers MCH(MSN) (methyl methacrylate, styrene, and acrylonitrile), MC(MS) (methyl methacrylate styrene, and CH-20(SN-20) (styrene acrylonitrile). The industry requires small, compressible L-1 beads, and coarse-grained copolymers that can be treated by extrusion. The surface tension was determined stalagmometrically. 100 parts by weight of monomer, 0.5 parts by weight of MKM stabilizer, PVA with acetate number

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S/191/61/000/008/001/006
B110/B201

Stabilization and regulation ...

2.04, and starch were carefully mixed with water (ratio 2.25 : 1). Lumps formed with low-viscous MKM-starch solutions. High-viscous MKM solutions do not stratify during ≥ 5 min. With other stabilizers, stratification takes place within 1 min. MSN and MS copolymerization is 20 - 30 min. faster with MKM stabilizer, as compared with starch or PVA stabilizers. The granulometric composition was determined by a set of sieves with mesh: 0.2; 0.25; 0.4; 0.6; 1.4; and 3.0 mm. Optimum values were obtained with PVA (Fig. 2). Optimum viscosity was obtained with a 5% MKM solution for pH 6.8 - 7.0. L-1 forms small beads with rising viscosity. The curves for MSN, SN-20 and MS are steep, and change little with a change of stabilizer viscosity. For high-viscous (1,800 - 2,00 cp) stabilizers, an emulsion polymerization takes place in addition to suspension polymerization. The authors polymerized L-1, SN-20, MSN, and MS at various stabilizer concentrations with different viscosities (81, 219, 223 cp - without disodium phosphate; 458 and 1,000 cp with Na_2HPO_4) with 0.25; 0.5; 0.75, and 1.0 per cents by weight of stabilizer. At all viscosities, the bead size of the copolymer SN-20 diminished with a rise of MKM concentration. With copolymer MSN, a concentration rise of low-viscous MKM (81 cp) caused

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B110/B201

Stabilization and regulation ...

a growth of the coarse-grained fraction, whereas that of high-viscous MKM (1,800 cp) scarcely reduced the bead size. In the MS copolymer, a concentration rise at 219 and 158 cp caused beads to become smaller. At 1,800 cp small beads were obtained at all concentrations. In a mixture of MMA and styrene, 12 and 15 % of MS copolymer were dissolved; water and stabilizer were added and mixed. The resulting 2 - 7 mm large granules were immediately cast to transparent, colorless products under pressure. Large

granules could not be obtained in the 1.5 m³ polymerizer with horseshoe mixer, as the speed of 63 rpm = 3.6 m/sec yielded 1-2 mm large copolymer beads, and the high initial viscosity of the organic phase inhibited the formation of an emulsion. A concentration and viscosity rise causes simultaneous emulsion polymerization (Table 3). In MS polymerization, an addition of 0.5 % of ammonium thiocyanate to water reduces the dry residue to half its amount; in SN-20 polymerization it reduces viscosity to half its value. The energy of the surface tension between the phases: monomer - aqueous stabilizer solution has a marked effect upon stability and dimensions of the monomer drops. A rise of viscosity and concentration of MKM stabilizer effects a rise of the surface tension between monomeric and aqueous phase. Inorganic substances, especially disodium phosphate, reduce
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S/191/61/000/008/001/006
B110/B201

Stabilization and regulation ...

the surface tension. The latter is also dependent upon the monomer character. Homogeneous MS- and L-1 beads are formed in case of a high surface tension. In case of a low surface tension, the drops are split and agglomerate especially in the phase ratio 2 : 1. The particle enlargement with initial concentration increase of MSN is explained by the effect of polar nitrile groups (7.5 %) in MSN. Emulsion polymerization takes place as a result of the partial monomer solution in stabilizer micelles. The molecular weights of an emulsion polymer precipitated by means of alum, and of polymeric beads are of the same order. After five cycles, the initial MKM is used up for the emulsion formation, and the polymer forms in lumps. MMA, etc. polymerization, according to P. M. Khomikovskiy, S. S. Medvedev, Trudy Tret'yey vsesoyuznoy konferentsii po kolloidnoy khimii Izd. AN SSSR, 1956, take place in aqueous solution as a consequence of initiation by means of peroxide radicals. In case of high stabilizer concentrations, MMA initiation takes place in emulsifier (e. g., MMA) micelles, which leads to a pronounced emulsion formation. Ammonium thiocyanate retards this in case of MS, and reduces the emulsion viscosity with SN-20. D. U. Alimova, V. A. Krysanova, and K. I. Abramova are thanked for their assistance in the experiments. There are 7 figures, 3 tables, and 7 references: 5 Soviet-

Card 4/6

25595

S/191/61/000/008/001/006
B110/B201

Stabilization and regulation ...

bloc and 2 non-Soviet-bloc.

Fig. 2: Effect of PVA concentration upon granulometric MSN and L-1 composition.

PVA concentration: 1) 0.5 wt %; 2) 1.5 %, 3) 2.5 %; 4) 0.5 %; 5) 1.5 %; 6) 2.5 %; A) residue, %; B) mesh, mm.

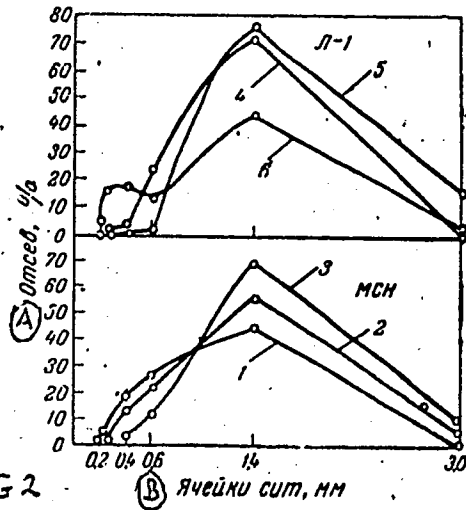


FIG 2

Card 5/6

15.8210

S/191/62/000/011/004/019
B101/B186

AUTHORS: Militskova, Ye. A., Sokolov, A. D., Yezhkova, Ye. S.

TITLE: Molding materials based on polyester acrylates

PERIODICAL: Plasticheskiye massy, no. 11, 1962, 10-12

TEXT: Molding materials TMGF-11 (TMGF-11), MGF-9 (MGF-9), and MAO-2 (MDF-2) polyester acrylates and powder fillers (quartz powder, talc, chalk, wood dust, etc.) are reported upon. Glass fiber used as a filler (diameter 7.3 μ , tensile strength 262 g, length 1.5-2 cm) was made water-repellent with Velan or with the preparation 246H (246 N). A paste of benzoyl peroxide and dibutyl phthalate 1:1 (2 parts by weight per 100 parts of polyester) was used as catalyst. The rate of curing and the mechanical, thermal, and electrical properties were tested. Results: (1) Molding materials containing quartz powder, talc, or fluorite as fillers needed to be worked at once, whereas materials filled with wood dust or glass fiber remained workable for 6 months. (2) Materials based on TMGF-11 with a powder filler were heat-resistant to 200°C but had an impact strength of only 4.2-4.4 kg-cm/cm². Materials based on MGF-9 or

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Molding materials based on ...

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B101/B186

MDF-2 with a powder filler showed an impact strength of 10.3-14.5 kg·cm/cm² but a Martens heat resistance of only 44-54°C. (3) Molding material based on TMGF-11 and filled with glass fiber was heat-resistant to 200°C and its hardness was 24.5 kg/mm²; but it was not as strong, as the other two molding materials. MGF-9 or MDF-2 filled with glass fiber gave a heat resistance of 45-80°C and their impact strength was increased to 100 kg·cm/cm² by using hydrophobic glass fiber. (4) For TMGF-11 materials, the rate of curing and the shear strength were slightly higher than for MGF-9 and MDF-2 materials. Wood dust reduced the shear strength, glass fiber raised it. (5) Increase of the molding temperature from 130 to 170°C, and of the benzoyl peroxide admixture from 0.1 to 1.0% accelerated hardening, which was virtually finished within 1.5-2 min for MDF-2 material. (6) Only glass-fiber filled products withstood the break voltage shock test at -50°C for 3 hrs, at room temperature for 2 hrs, and at 130°C for 2 hrs. (7) The breakdown voltage was 20-25 kv/mm for all products investigated. The most suitable of these materials was pressed into parts for use in the automotive industry (distributor caps) at 130-135°C, a pressure of 60 kg/cm² and a molding time of 4-5 min. There are 2 figures. ✓

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L 13017-63 EPF(c)/EPR/EWP(1)/EWT(m)/BDS AFFTC/ASD Pr-4/Ps-4/Pc-4 RM/WW
ACCESSION NR: AP3000406 8/0191/63/000/005/0063/0063

AUTHOR: Militakova, Ye. A.

73
72

TITLE: Thermostabilization of colorless copolymers

SOURCE: Plasticheskiye massy*, no. 5, 1963, 63

TOPIC TAGS: thermostabilization, colorless copolymers, tinuvine Roman two, tinopal, methylmethacrylate, styrene, trinonylphenylphosphate, nitrylacrylic acid

ABSTRACT: The problem of preventing the alteration of colorless copolymers in processing led the author to test tinuvine II and tinopal (Swiss products) in achromatic MS copolymer (methylmethacrylate + styrene). Tinopal was combined with MS in proportions of 0.02 and 0.06% before polymerization. Tinuvine II was added to MS during rolling in an amount of 0.1%. Products molded from stabilized MS were subjected to 2 and 24 hours' exposure to a PRK-2 quartz lamp. After 2 hours, no change was apparent in the stabilized products, and only slight yellowing was noted after 24 hours. Evidently more tinuvine (up to 0.5%) should be added. Trinonylphenylphosphate (TNPP; French patent) proved the most effective thermo-oxidizer for colorless polymers. Added before polymerization to copolymers MS and MSN (methylmethacrylate, styrene, and nitrylacrylic acid) in amounts of 0.5 parts per 100 parts monomer, it had no appreciable effect on the rate of polymerization. The
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L 13017-63

ACCESSION NR: AP3000406

color and strength of TNPP-stabilized MS products were not affected by molding in IM-50 equipment at 200-205C or 215-220C at a specific pressure of circa 1400 kg/sec/cm sup 2, and the triple copolymer, MSN, was affected to an equally slight extent by processing and exposure to the quartz lamp. TNPP is therefore recommended for the stabilization of colorless, transparent, molded copolymers.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 10Jun63

ENCL: 00

SUB CODE: MA

NO REF SOV: 000

OTHER: 000

Card 2/2

ACCESSION NR: AP4045019

S/0191/64/000/009/0020/0023

AUTHOR: Militskova, Ye. A., Viktorov, Ye. S.

TITLE: Effect of molding conditions and the resulting orientation on the strength properties of high-impact polystyrene products

SOURCE: *Plasticheskiye massy**, no. 9, 1964, 20-23

TOPIC TAGS: polystyrene, impact strength, molding, flexural strength, polymer orientation, copolymer SNP-2

ABSTRACT: Standard polystyrene rods obtained under different molding conditions were tested for impact strength and orientation. It was found that the specific impact strength decreases considerably with increasing molding temperature, owing to the increased partial destruction of the material in the heating cylinder. The recommended molding temp. is 170-190C. The curve relating the impact strength of polystyrene to the time of the material under pressure shows that with increasing time (to a certain extent), the strength properties of the moldings are improved because of the resulting condensation of the material. However, in case of high-molecular-weight polystyrene, with its ability to orient in the melt, a prolonged stay in the mold under pressure gives negative results because of the increasing internal stresses. For polystyrene UP-2, the melting index is 1.5

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ACCESSION NR: AP4045019

times less than for the impact resistant polystyrene VP-11. For molding high-impact polystyrene, the material should be kept in the mold under pressure for 15-20 sec., including the time of introduction of the plunger. A molding temperature of 180C ensures the best filling of the molds at all pressures. It is more suitable to increase the pressure than the temperature. The specific impact strength of the products was determined at -40C. In all cases, the impact strength of polystyrene VP-P and UP-2 was 2-2.5 times as high at -40C as at +20C. This must be taken into account in molding. The effect of orientation on the flexural and impact strength was investigated on samples (10 x 15 mm) cut parallel and perpendicular to the flow direction of the material. The strength properties were better when the stress was applied perpendicularly to the flow direction. The molecular orientation obtained by molding can be fixed only in products in which the load acts in one direction. The greatest difference in strength was observed near the flow gate, where the material is under the greatest pressure and where the greatest orientation is found. The curves of specific impact strength and static flexural stress have well-defined minima arranged at different distances from the gate for different polystyrene samples. This distance depends on the flow of the material, which can be characterized by the melting index. The melting index of the copolymer SNP-2 at a maximum permissible mold temperature of 245C was 0.55, i.e. it was increased considerably. Orig. art. has: 7 figures.

Card 2/3

ACCESSION NR: AP4045019

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: MT

NO REF SOV: 003

OTHER: 002

3/3

Card