

*DINULESCU, N. R.*

RUMANIA/Human and Animal Physiology - Respiration.

V-5

Abs Jour : Ref Zhur - Biol., No 4, 1958, 18235

Author : N.R. Zamfirescu, S. Rosenzweig, B. Feiberg and Ernestina  
Dinulescu.

Inst : \_\_\_\_\_

Title : Spirographic Examinations of Individuals with Heart  
Ailments.

Orig Pub : Fiziol. norm. si patol, 1956, 3, No 4, 471-478

Abstract : A study was made of the respiration of 16 patients with  
both compensated and decompensated heart diseases. A  
significant reduction was seen in maximal ventilation  
and respiratory reserve. Vital capacity was relatively  
slightly decreased (in the majority of patients there  
were no symptoms of congestion).

Card 1/1

Country : RUMANIA  
Category: Human and Animal Physiology. Circulation.  
Blood Vessels

T

Abs Jour: RZhBiol., No 19, 1958, 88881

Author : Corneanu-Dobea, M.; Dinulescu, E.; Haulica, A.  
Inst : Rumanian Academy  
Title : Investigation of Vascular Reflexes in Ulcerous Disease

Orig Pub: Studii si cercetari fiziol. Acad. RPR, 1957, 2, No 3+4,  
429-434.

Abstract: No abstract.

Card : 1/1

T-48

IOANITIU, D.; DINULESCU, Elena; ESANU, C.; MITRACHE, Luđmila; KIM-HO-YUN

Disorders of protein metabolism in clinical hyperthyroidism and  
hypothyroidism. Stud. cercet. endocr. 13 no.5:663-673 '62.

(HYPERTHYROIDISM) (HYPOTHYROIDISM)  
(PROTEIN METABOLISM DISORDERS) (BLOOD PROTEIN ELECTROPHORESIS)

PITIS, Marcela; SPANDONIDE, T.; GIOVINACHE, A.; DINULESCU, Elena

Investigation of hyperthyroidism in the aged. Stud. cercet.  
endocr. 14 no. 3:355-365 '63.

(HYPERTHYROIDISM) (GERIATRICS)

STANESCU, V.; FLOREA, I.; DINULESCU, Elena

Effect of thymectomy on the changes in total serum proteins and amino acids produced by the growth hormone. Stud. cercet. endocr. 15 no.1:76-79 '64.

SERBAN, A.L.M.D.; DINULESCU, Elena; BELJOIU, D.; CUPCEANCU, B.

Changes in free fatty acids after castration and administration  
of estrogens. Stud. cercet. endocr. 16 no.3:263-269 '65.

MILCU, St.-M., acad.; ESANU, C.; MITRACHE, Ludmila; DINULESCU, Elena;  
GRIGORESCU, A.

Pathology of lipid metabolism in obese patients. Stud. cercet.  
endocr. 16 no.3:270-277 '65.

AUGUSTIN, M.; DINULESCU, Elena; GAROIU, M.; DRAGUSANU, M.; BELLOIU, D.

Changes in the mobilization of free fatty acids after administration  
of heparin, in relation to age. Stud. cercet. endocr. 16 no.3:299-  
301 '65.



DINULESCU, G.; STOENESCU, D.; MANOIU, I.; RAUCHBACH, C.; DRAGOIU,  
I.; DUNCIU, Iv.; FRUCHTER, J.

Study of piperazine as an anthelmintic in ascariasis,  
ankylostomiasis and trichuriasis in dogs. Stud. cercet. inframicrobiol  
Bucur. 6 no. 1-2:285-298 Jan-June 55.

(HELMINTH INFECTIONS

in dogs, ther., piperazine)

(PIPERAZINES, ther. use

helminth infect. in dogs)

(DOGS, diseases

helminth infect., ther., piperazine)

(HOOKWORM INFECTION

in dogs, ther., piperazine)

DINULESCU, G.,; STOENESCU, D.,; MANOIU, I.,; IVANA, Ilie.,; VISAN, C.,;  
TEODORU, M.,; RAUGHBACH, C.,; NEGRU, I.,; LOVIN, Dan.

Piperazine as anthelmintic in parascariasis, oxyuriasis and strongylosis in horses. Stud. cercet. inframicrobiol., Bucur. 6 no.1-2:295-300 Jan-June 55.

(ASCARIASIS  
parascariasis in horses, ther., piperazine)  
(OXYURIASIS  
in horses, ther., piperazine)  
(NEMATODE INFECTIONS  
in horses, ther., piperazine)  
(HELMINTH INFECTIONS  
in horses, ther., piperazine)  
(PIPERAZINES, ther. use  
helminth & nematode infect. in horses)  
(HORSES, dis.  
helminth & nematode infect., ther., piperazine)

DINULESCU, G.; STOENESCU, D.; RAUCHBACH, C.; MANOIU, I.; NEGRU, D.;  
DUNCIU, Ivanca; DRAGOI, I.; LOVIN, D.

Studies of the invasive elements in parasitoses in dogs. Stud.  
cercet. inframicrobiol., Bucur. 6 no.3-4:587-593 July-Dec 1955.

(PARASITIC DISEASES

intestinal, indogs, etiol. & transm.)

(GASTROINTESTINAL DISEASES

parasitic, in dogs, etiol. & transm.)

RUMANIA/Zooparasitology - Parasitical Worms. General Problems.      G-2

Abs Jour : Ref Zhur - Biol., No 16, 1958, 72305

Author : Dinulescu, Gh., Stoenescu, D., Ricman, T., Rauchgach, G.,  
Dragoi, I., Sozanschi, M., Negru, D., Donciu, Iv., Giuglea,  
M.

Inst : -

Title : On the Frequency of Human Helminthiasis and Its Relation  
to Canine Helminthiasis.

Orig Pub : Studii si cercetari inframicrobiol. si parasitol., 1957,  
8, No 2, 297-303.

Abstract : Infection with helminths of the servants (42) and in dogs  
(918) from the same nurseries was studied. In human  
beings there were principally found the helminths peculiar  
to man and much rarely those common to both man and dog.

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DINULESCU, G.

*Gastrophilus inermis* Brauer, pathogenic agent of rectitis and parasitic  
rectal prolapse in horse. Stud. cercet. inframicrobiol., Bucur. 8, no.3:  
435-444 1957.

(RECTUM, diseases  
prolapse & rectitis caused by bot-fly infect. in horses)

(FLIES  
bot-fly larvae causing rectitis & rectal prolapse in horses)

(HORSES, diseases  
rectal prolapse & rectitis caused by bot-fly infect.)

DINULESCU, I.

5000

R I I M .

(Separation of paraffin hydrocarbons from heavy petroleum fractions by urea. V. Dinulescu, I. Irimescu, I. Irimescu, and A. Pounovic. Acad. Rep. Populare Romane, Studii Cercetari Chim. 2, 1971, 1-10. (French summary).) Several paraffin waxes, m. pt. 50-100, were recovered from heavy petroleum fractions (I) by means of complex formation with  $(NH_2)_2CO$  (II) or  $(NH_2)_2CS$  (III). The procedures used included: (1) reaction of an excess of solid II or III with I in the absence of diluents by using small amts. of an accelerator; (2) reaction as in procedure 1 but in the presence of solvents acting as accelerators; (3) reaction of an aq. soln. of II or III with a soln. of I in suitable solvents. The following solvents were used: MeOH, EtOH, iso-PrOH, iso-BuOH, a mixt. of amyl alcoh., Me<sub>2</sub>CO, and MeCOEt. With the exception of MeOH, all solvents required small amts. of H<sub>2</sub>O to be effective as catalysts. Mixts. of 1.5 parts ligroine and 0.5 parts of the solvents listed were equally suitable. Min. reaction time in all cases was 30 min. The cryst. products were recovered from the complex by washing with H<sub>2</sub>O at a temp. above the m.p. of the paraffins and decantation or extrn. with CCl<sub>4</sub> or ligroine b. 90-110°. The yields obtained were almost quant. Gerard Aufleger

GA

DINULESCU, Ilie

"Acylamino-methylation, a General Method of Substitution of the Aromatic Ring." Revue de Chemie, Vol. 2, 1954, Bucharest.

NEKHOSESKU, K.D.; <sup>c</sup>DINOLESKU, Iliye G.

Equilibrium between iso and normal 9-nitrofluorene. Izv.AN SSSR.  
Otd.khim.nauk no.10:1228-1232 O '58. (MIRA 11:12)

1. Otdel khimicheskikh issledovaniy Akademii Rumynskoy Narodnoy  
Respubliki.

(Fluorene)



DINULESCU, I G

Isomerization of 1,2-*trans*-dibromocyclohexane under the influence of anhydrous aluminum bromide. Costin D. Nenitrescu and Ilie G. Dinulescu. *Acad. rep. populare Romane, Studii cercetari chim.* 1, 7-14 (1959).—Hydrogen migration in dihalocyclohexanes was investigated following previous work (C.A. 37, 3740<sup>a</sup>) on H<sup>+</sup> migration in Friedel-Crafts type reactions. Present work concerned behavior of dibromocyclohexanes in the presence of anhyd. AlBr<sub>3</sub> at 0° in a nonpolar inert medium, CS<sub>2</sub>. 1,2-*trans*-Dibromocyclohexane isomerized to yield 70-87% isomeric product contg. approx. 25% cryst. *trans*-1,4-C<sub>6</sub>H<sub>10</sub>Br<sub>2</sub> and 75% liquid, mostly 1,3-C<sub>6</sub>H<sub>10</sub>Br<sub>2</sub> (probably *trans*), dissolving partly the 1,4-isomer. No residue of initial 1,2-isomer was detected. The same final equil. compn. was obtained with *trans*-1,1-C<sub>6</sub>H<sub>10</sub>Br<sub>2</sub>, 1,3-C<sub>6</sub>H<sub>10</sub>Br<sub>2</sub> (probably *trans*), and *trans*-1,4-C<sub>6</sub>H<sub>10</sub>Br<sub>2</sub> as initial isomer. The reaction conformed to carbocation formation, under influence of the electrophilic catalyst, followed by H<sup>+</sup> migration. Similar work with a polar medium, HBr, gave different results (cf. Coering and Sims).  
M. Lapidot

3  
HEB  
299 (HB)

TA  
4

98

AVRAM, Margareta; MATIESCU, Gheorghe D.; DINU, Doina; DINULESCU, Ilie G.;  
NENITESCU, Costin D., acad.

Studies in cyclobutane series (VIII). Adducts of benzocyclobutadiene  
with some cyclic dienes. Studii cerc chim 9 no.3:435-445 '61.

1. Institutul de chimie al Academiei R.P.R., Sectia de chimie organica,  
Bucuresti.

AVRAM, Margareta; STERNBERG, Renée; DINULESCU, I.G.; NENITESCU, C.D., acad.

Condensation of 1,3-dicid-2-phenylpropane with ethyl malonate. Studii  
cer chin 10 no.1:73-80 '62.

1. Centrul de cercetari chimice al Academiei R.P.R., Sectia de chimie  
organica, Bucuresti. 2. Membru al Comitetului de redactie si redactor  
responsabil, "Studii si cercetari de chimie" (for Nenitescu).

AVRAM, Margareta; MATEESCU, G.D.; DINU, Doina; DINULESCU, I.G.;  
NENITZESCU, C.D. [Nenitescu, C.D.] Member of the Academy of the R.P.R.

Investigations in the cyclobutane series (VIII). Rev chimie 8  
no.1:77-86 '63.

1. Institute of Chemistry of the Academy of the R.P.R., Bucharest.

DINULESCU, Ilie G.; AVRAN, Margaret; MATEESCU, Gheorghe D.; BRUNETESCU,  
Costin D.

Research in the cyclobutane series. Pt.14. Studii cerc chim 12  
no.5:357-364 '64

1. Center of Organic Chemistry Research, Rumanian Academy, Polizy  
St., no.1, Bucharest.

DINULESCU, Maria, ing.; DODU, Ar., ing.

Processing of polynitrilacrylic fibers in knitwear mills. Ind text Rum  
13 no.1:20-26 Ja '62

1. Institutul de cercetari textile.

GAVAT, I.; BUCUR, Evghenia; DINULESCU, Mioara; ANTONESCU, P.

Some anticorrosive protections obtained from sulfochlorinated polyethylene. Rev chimie Min petr 15 no.2:101-106 F '64.

DINIEUSCH, Nicolae

On normal astronomical refraction. Studii astron 9 no. 1:  
9-13 '64.



RUSSIAN Notice

On the Japanese refraction formula. Trudii astron. obshch. 9 no.21977-200  
164.

1. Astronomical Observatory of the Russian Academy, Bisharest,  
5 Sushal de ... Street.

DINULESCU, N.

On astronomical refraction. Studii astron 10 no.1:3-6 '65.

1. Astronomical Observatory 5, Cutitul de Argint St., Bucharest.  
Submitted October 20, 1964.

FRIBOIANU, I.; POPESKO, E.; DINULESKO, I.; POPOVICH, N.; TUDOZE, M.

Our experience with the treatment of spinal cord compression following spondylitis. Khirurgia 15 no.2/3:252-253 '62.

(SPINAL CORD dis)  
(TUBERCULOSIS SPINAL compl)

DINULESKU, N. [Dinulescu, N.]

Three variable stars. Per.svezdy 12 no.1:53-57 S '57  
[Publ.1959.] (MIRA 13:5)

1. Gosudarstvennyy astronomicheskiy institut im. P.K.  
Shternberga, Moskva.  
(Stars, Variable)

L 46814-66

ACC NR: AT6020498

SOURCE CODE: CZ/2514/65/000/051/0058/0061

AUTHOR: Dinulescu, Vasile

23  
B71

ORG: Bucharest Observatory

TITLE: Some remarks on the date of the actual solar activity minimum

SOURCE: Ceskoslovenska akademie ved. Astronomicky ustav. Publikace, no. 51, 1965. 3rd Consultation on Solar Physics and Hydromagnetics, Tatranska Lomnica, 13-16 October 1964, 58-61

TOPIC TAGS: sunspot, sunspot cycle, sunspot area, solar activity

ABSTRACT: The author discusses the method used to find the date of actual minimum solar activity for cycle no 20, which began on 28 August 1963, (rotation 1471) by a pore which appeared in the latitude of +34°. The ratio of the number of new groups which appeared per rotation in the new and old cycles increases in value

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ACC NR: AT6020498

beginning with rotations 1479 to 1482, with groups from the new cycle predominating in relation to the groups of the old cycle in rotations 1482 and 1483. The separation of the spots into cycles was made using the latitudes as criterium. It was not possible to use the magnetic separation criterium due to incomplete data. The relative Wolf (R) number decreased in 1964, to a minimum in July, which had the most days with a zero Wolf number. The correct monthly mean areas, according to another work, [Fenomeni Solari, circolare No. 73—80, Osservatorio Astronomico di Roma, 1964] also show July as the month with the smallest area: eight-millionths of the hemisphere. Calculations and conclusions based on Giovanelli's data [Giovanelli, R. G. The Observatory, No. 939, p. 57—66, April 1964] show that when the cycles 19 and 20 are superposed, the latest spots from the old cycle will appear in the interval of rotations 1502 to 1508, and the two curves will intersect at the interval of rotations 1486 to 1490, because the first group of spots from the new cycle appeared during rotation 1471. Determination of the moment of intersection of the decay and rise curves for the present cycle using the diagram of Giovanelli completed with up-to-date values for the new cycle, shows the intersection point to be at rotation 1484. On the

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L 46814-66

ACC NR: AT6020498

basis of comparisons of minimum solar activity for cycles 13-19 with data produced by the intersection of decay and rise curves, rotations 1481 to 1488 are found for the present minimum. The table included in the original text shows rotation 1483 to be that which up to now had the smallest value for relative Wolf number. The moment of the minimum will be obtained from the mean of the relative numbers in the period of minimum activity. Orig. art. has: 5 tables, and 1 figure. [GC]

SUB CODE: 03/ SUBM DATE: none/ SOV REF: 001/ OTH REF: 004/

Card 3/3-LC

DINULET, Nicolae

A front worker in artistic activity. Constr Buc 14 no.649z4 16 Je '62.

1. Instructor artistic la Intreprinderea de constructii siderurgice, Hunedoara.



DINULET, Nicolae

The Trade Union Club of the Hunedoara Enterprise of  
Siderurgical Constructions supports production.  
Constr Buc 15 no.697:1 18 My '63.

1. Directorul clubului "Constructorul" al sindicatului  
Intreprinderii de constructii siderurgice, Hunedoara.

CARARE, T., ing.; DINULIU, Rodica, ing.

Improved steels for reinforced and prestressed concretes assimilated  
or in course of assimilation in Rumania. Rev constr si mat constr  
16 no.10:518-523 0 '64.

YUGOSLAVIA

JOVANOVIC, Dr D., Dr M. TOMIC, and Dr D. DENULOVIC, Clinic of Obstetrics and Gynecology (Ginekolosko-akuserska Klinika), Faculty of Medicine (Medicinski Fakultet), Belgrade. (Director: Prof. Dr. B. MILOSEVIC).

"The Compression and Rupture of the Umbilical Cord During Childbirth"

Belgrade, Medicinski Glasnik, Vol 17, No 5, May 1963, pp 190-192.

Abstract: [Authors' Serbocroatian summary modified] The most frequent causes of trouble with the umbilical cord in childbirth are sideways or crosswise positions in the womb and pronounced cephalopelvic disproportion. Childbirth must be completed as soon as possible if the umbilical cord is compressed or broken, by operation if necessary, unless the infant is already dead. The authors describe their experiences with 30 such cases out of 12,524 births at their clinic between 1957 and the end of May 1962.

4 Yugoslav and Western references.

1/1

DINULOVIC, Dusan, dr.; POLJAKOVIC, Ljubica mr. ph.

Determination of ovulation by the Takata-Ara reaction. Med.  
glas. 19 no.1:26-28 Ja '65.

1. Ginekolosko-akuserska klinika Medicinskog fakulteta u Beogradu  
(Upravnik: prof. dr. B. Milosevic).

MILOSEVIC, Bosiljka; DINULOVIC, Dusan; RADIVOJEVIC, Radivoje

Apropos of a case of external migration of the ovum. Srpski arh. celok. lek. 91 no.3:323-326 Mr '63.

1. Ginekolosko-akuserska klinika Medicinskog fakulteta Univerziteta u Beogradu Upravnik: prof. dr Bosiljka Milosevic  
I hirurska klinika Medicinskog fakulteta Univerziteta u Beogradu Upravnik: prof. dr Bogdan Kosanovic.  
(OVUM) (FALLOPIAN TUBES) (OVARY)  
(PREGNANCY, TUBAL)

DINZBURG, B.N., inzhener.

~~XXXXXXXXXX~~  
Moisture capacity of artificial astrakhan. Leg. prom. 17 no.5:  
21-23 My '57. (MLBA 10:6)  
(Tur, Artificial) (Hygroscopicity)

DINZBURG, B.N., inzh.; SAFRAY, B.A., kand.tekhn.nauk

~~Using phenol resins in producing rubber for shoe soles. Leg.~~  
prom. 18 no.9:26-28 S '58. (MIRA 11:10)  
(Rubber, Synthetic)

DINZBURG, B.N., starshiy nauchnyy sotrudnik; SAFRAY, B.A., kand.tekhn.nauk

New active white filler used for lightweight porous rubbers. Kozh.-  
obuv.prom. no.4:23-24 Ap. '59. (MIRA 12:7)  
(Rubber) (Shoe machinery)



S/064/60/000/01/18/024  
B022/B008

AUTHORS: Dinzburg, B. N., Safray, B. A., Candidate of Technical Sciences

TITLE: A New Active White Filling Material From Waste of Super-phosphate Production

PERIODICAL: Khimicheskaya promyshlennost', 1960, No. 1, pp. 76 - 77

TEXT: The Institute mentioned under Association together with a number of other institutes worked out the technique for the production of silica gel (under the name of "Belaks") from waste of super-phosphate production nonutilized at present, which is to be used as white filling material for high-quality colored rubber. The production of silica gel is divided into 4 principal stages: separation of silica gel from silicofluoric acid on rubber-covered filtering centrifuges, washing of silica gel, drying, milling, and sifting. The properties of the "Belaks" are compared with those of the powdered silica gel in Table 1. The mean comparative values of the rubber types "Ekstra" and "Progress" filled with powdered silica gel and Belaks (Table 2), the results of the aging tests of the 2 types

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A New Active White Filling Material From Waste of Super-phosphate Production S/064/60/000/01/18/024  
B022/B008

of rubber mentioned (Table 3) as well as the results of the resistance-to-frost tests of porous rubber types filled with powdered silica gel and Belaks (Table 4) are given. It appears from the results that the properties of the active white filling material are equivalent to those of powdered silica gel. The industrial properties of "Belaks" were checked industrially. The Kalininskiy kombinat "Iskoz" (Kalinin Kombinat "Iskoz" (Synthetic Leather)), the kombinat v Maardu (Kombinat at Maardu), the Kiyevskiy regeneratno-rezinovyy zavod (Kiyev Rubber Regenerating Plant), and the Vinnitskiy superfosfatny zavod (Vinnitsa Super-phosphate Plant) are mentioned. There are 4 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh materialov i iskusstvennoy kozhi (All-Union Scientific Research Institute of Film-forming Materials and Synthetic Leather)

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S/191/61/000/003/013/015  
B124/B203

15.8220

2209

AUTHORS: Kogan, L. M., Safray, B. A., Dinzburg, B. N., Polinskiy, S. L.

TITLE: New incombustible plasticizers of PVC

PERIODICAL: Plasticheskiye massy, no. 3, 1961, 67-69

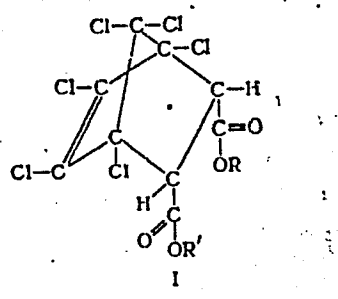
TEXT: As is known, the compatibility with PVC rises with the polarity of the plasticizer, whose efficiency is determined by the aliphatic and also by the cyclic part of its molecule. Esters with several chlorine atoms in the molecule are of interest in this connection. Direct chlorination of the ester or of the corresponding acid is, however, difficult; the synthesis of these compounds is simpler from compounds containing chlorine in the molecule, particularly from acids of polycyclic structure with several chlorine atoms, and from aliphatic alcohols. As PVC plasticizers, the authors synthesized and tested the diesters of 1,4,5,6,7,7-hexachloro bicyclo-(2,2,1)-5-heptene-2,3-dicarboxylic acid (so-called chlorendic acid) and of aliphatic alcohols. They called these compounds dialkyl chlorendates. Dialkyl chlorendate molecules have the following structure:

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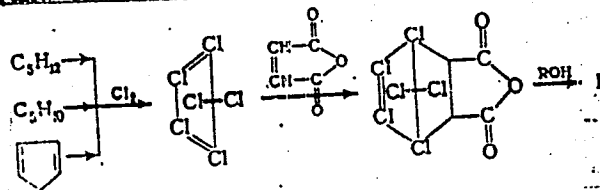
New incombustible plasticizers of PVC

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B124/B203



The synthesis of such a compound can be represented as follows:



Chlorine and petroleum hydrocarbons are initial substances for the new

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New incombustible plasticizers of PVC

plasticizers. The authors tested diesters with the same aliphatic radicals containing 1-8 carbon atoms. Tables 1 and 2 give the results of determination of the properties of products obtained from PVC with esters of chlorendic acid, i.e., dimethyl ester of chlorendic acid (C-561) and dibutyl ester (C-564) alone and combined with dibutyl phthalate (DBP). The initial material used was PVC resin of the type ПЭ-1 (PF-1) (according to ГОСТ 3119-46 (GOST 3119-46)) with a viscosity of the 1% solution in dichloro ethane of 2.3 cp, an ash content of 0.15%, a destruction temperature of 165°C, a thermostability of 25 min, a basicity of 0.04%, traces retained on sieve- 015 (GOST 6613-53). Table 3 gives the results of tests made on plasticized PVC films. The results reveal that the new synthetic plasticizers are superior to DBP with respect to incombustibility, higher aging resistance, and reduced stickiness. The authors thank Professor A. A. Berlin for his help. There are 3 tables and 10 references: 9 Soviet-bloc and 1 non-Soviet-bloc.

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B124/B203

New incombustible plasticizers of PVC

Таблица 1

Tables 1 and 2. Composition and swelling conditions of PVC in dimethyl chlorendate and its mixtures with dibutyl phthalate

Legends: (1) no. of specimen, (2) amount of plasticizer, parts by weight per 100 parts by weight of PVC, (a) DBP, (3) swelling conditions, (b) first period, (c) second period, (α) temperature, °C, (β) time, hr, (γ) temperature, °C, (δ) time, hr.

Состав и условия набухания поливинилхлорида в диметилхлорендате и его смесях с дибутилфталатом

№ образца	ⓐ Количество пластификатора вес. ч. на 100 вес. ч. ПВХ		ⓑ Условия набухания			
	С-501	ДФФ	ⓓ 1-й период		ⓔ 2-й период	
			температура, °C	продолжительность, часы	температура, °C	продолжительность, часы
1	150,0	0	75	13	100	8
2	100,0	0	75	13	100	8
3	70,0	0	75	13	100	8
4	52,5	17,5	75	13	—	0
5	35,0	35,0	75	11	—	0
6	17,5	52,5	75	8	—	0
7	10,0	60,0	75	8	—	0
8	0	70,0	75	8	—	0

Table 1

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New incombustible plasticizers of PVC

Таблица 2

Состав и условия набухания поливинилхлорида в дибутилхлоридате и его смесях с дибутилфталатом

④ № образца	⑤ Количество пластификатора вс. ч. на 100 вс. ч. ПВХ		⑥ Условия набухания			
	C-564	⑦ ДБФ	⑧ 1-й период		⑨ 2-й период	
			⑩ темпера- тура, °C	⑪ продолжи- тельность часы	⑫ темпера- тура, °C	⑬ продолжи- тельность часы
9	150,0	0	100	24	—	0
10	100,0	0	100	18	—	0
11	70,0	0	100	18	—	0
12	50,0	0	100	13	—	0
13	52,5	17,5	75	3	100	9
14	35,0	35,0	75	3	100	9
15	17,5	52,5	75	3	100	9
16	10,0	60,0	75	3	—	0
8	0	70,0	75	3	—	0

Table. 2

Card 5/6

20489

S/191/61/000/003/013/015  
B124/B203

New incombustible plasticizers of PVC

Table 3. Some properties of PVC plasticized with dialkyl chlorendates and their mixtures with dibutyl phthalate

Legend: (1) no. of specimen, (2) plasticizer, (3) tensile strength, kg/cm<sup>2</sup>, (4) relative elongation, %, (5) loss in weight, %, (a) within 12 days at 70°C, (b) within 6 hr under a ПРК-4 (PRK-4) lamp at 70°C, (6) combustibility, (7) dimethyl chlorendate, (8) dibutyl chlorendate, (9) dioctyl chlorendate, (10) on removal of the flame all specimens stop burning except for no. 8.

Card 6/6

① № образца	② Пластификатор	③ Предел прочности при растяжении кг/см <sup>2</sup>	④ Относительное удлинение %	⑤ Потеря веса, %		⑥ Горючесть
				а) за 12 суток при 70°	б) за 6 ч. под лампой ПРК-4 при 70°	
1	⑦ Диметилхлор-эндат	160	138	9,4	1,9	При удалении пламени все образцы, кроме № 8, самозатухают
2		202	171	9,7	2,1	
3		228	85	4,5	0,4	
4		250	173	13,5	1,6	
5		190	223	16,8	1,1	
6		133	210	14,9	1,7	
7		113	300	25,0	2,2	
8		120	250	17,2	2,1	
9	⑧ Дибутилхлор-эндат	82	141	17,5	—	
10		120	106	9,0	1,9	
11		217	132	1,5	1,5	
12		245	105	0,8	—	
13		193	165	4,8	0,8	
14		150	220	8,9	2,7	
15		110	255	9,7	5,4	
16		115	313	14,1	3,9	
17	⑨ Диоктилхлор-эндат	251	75	—	0,4	
18		279	151	—	0,7	
19		238	129	—	1,3	
20		234	162	—	1,8	



L 52355-65 EWR(j)/EWT(m) Pc-4 FM

ACCESSION NR: AT6012716

UR/3150/62/000/013/0003/0020

17  
16  
B+1

AUTHOR: Dinzburg, B. N. (Senior research associate); Safraz, B. A. (Candidate of technical sciences); Seraboyan, B. K. (Doctor of chemical sciences)

TITLE: Use of condensation resins in the preparation of rubber products. Report No. 2

SOURCE: Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh materialov i iskusstvennoy kozhi. Nauchno-issledovatel'skiy trudy, no. 19, 1962, 3-20

TOPIC TAGS: synthetic rubber, butadiene styrene rubber, condensation resin, vulcanizate, thermosetting resin, phenol formaldehyde resin, filler, resite stage

ABSTRACT: The authors studied the properties of vulcanizates of the butadiene-styrene rubber SKS-30, prepared by using thermosetting rubber-resin mother mixtures. The influence of phenolic resins in the absence of fillers and the effect of fillers on rubber strengthened by phenol-formaldehyde resins were examined. The work also involved a study of the possible mechanism of strengthening of butadiene-styrene rubbers by phenolic resins when rubber-resin mother mixtures are prepared. The resin employed was the phenol-aniline-formaldehyde resol 211. Mechanical blending of rubber SKS-30 with the resin at a temperature sufficient for conversion of the resin into the resite stage causes the formation of various rubber-resin structures having diverse physico-mechanical properties. The study of the interaction between

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I 52355-65

ACCESSION NR: AT5012716

the rubber and resin has led to the hypothesis that, initially, part of the linear resin on conversion from the resol stage to the resite stage in the rubber medium combines with the latter, forming a graft polymer in which the length of the side chain is considerably shorter than that of the main macromolecule. This is represented by Fig. 1 of the Enclosure. As the resin content increases, a simultaneous formation of type A structures and isolated particles of resite in the rubber mass takes place, and the type A structures may link up with the resite particles to form a rubber-resin structure of type B (see Fig. 2 of the Enclosure). Orig. art. has: 19 figures and 4 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh materialov i iskusstvennoy kozhi, Moscow (All-Union Scientific Research Institute for Film Materials and Artificial Fabric)

SUBMITTED: 00

ENCL: 00

SUB CODE: MT

NO REF SOV: 004

OTHER: 001

Card 2/4

L 52355-65

ACCESSION NO: AT5012716

ENCLOSURE: 01

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Fig. 1. Diagram of rubber-resin compound (type A): 1 - rubber macromolecule; 2 - phenol-formaldehyde resin.

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I. 52355-45

ACCESSION NR: AT5012716

ENCLOSURE: 02



Fig. 2. Diagram of rubber-resin compound (type B): 1 - rubber macromolecule; 2 - particle of phenol-formaldehyde resin converted into resite stage.

Card 4/4 7/8

KHOROSHAYA, Ye.S.; KOVRIGINA, G.I.; DINZBURG, B.N.; SAFRAY, B.A.

Rapid method for the chemical analysis of butadiene-styrene  
rubbers reinforced with phenol-anilino-formaldehyde resins.  
Plast.massy no.2:67-68 '62. (MIRA 15:2)  
(Rubber, Synthetic)      (Resins, Synthetic)

DINZBURG, E.N., starshiy nauchnyy sotrudnik; SAFFAY, E.A., kand.tekhn.nauk;  
BARAMBOYM, N.K., doktor khim. nauk

Use of condensation resins for the production of rubber goods.

Report No.2. Nauch.-issl. trudy VNIPIK no.13:3-20 '62.

(MIRA 18:1)

DINZBURG, B.N.; SAFRAY, B.A.; BARAMBOYM, N.K.

Modification of butadiene-styrene rubbers with thermosetting resins. Part 1. Vysokom.sped. 4 no.7:1019-1026 JI '62. (MIRA 15:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh materialov i iskusstvennoy kozhi.  
(Rubber, Synthetic) (Styrene polymers)  
(Phenol condensation products)

L 13537-63

EWP(j)/EWT(m)/BHS AFTT/ASD Pc-4 RM

ACCESSION NR: AP3003287

S/0138/63/000/006/0010/0013

63  
60

AUTHOR: Dinzburg, B. N.; Safraz, B. A.; Tsipenyuk, E. V.; Zhurko, V. A.

TITLE: Modification of rubbers by thermoreactive rubber-resin master batches

SOURCE: Kauchuk i rezina, no. 6, 1963, 10-13

TOPIC TAGS: thermoreactive phenolic resin, modification of rubber, rubber-resin master batches, bakelite resin

ABSTRACT: A method was developed to reinforce nonpolar rubbers by the incorporation of comminuted bakelite resin into a film of rubber on heated rollers, beginning at 40-60C and ending at over 140C. When the mixture was compounded of 100 parts rubber, 30 parts bakelite, and 30 parts powdered silica gel, the optimal duration of the process was 10-25 minutes. The resulting product is a solid nonsticky mass which can be handled like ordinary rubber and can be used for various kinds of rubber compounds. It keeps for several days but must be reworked if used after prolonged storage. The most effective bakelite type resin

Card 1/2



L 13537-63

ACCESSION NR: AP3003287

is the one containing an amino group. The new varnish resins are effective irrespective of composition, providing hexamethylenetetramine was used as the polymerizing agent. The obtained master batches produced colored vulcanizates with satisfactory strength, as well as higher elasticity and resistance to freezing. Orig art. has: 1 picture, 2 charts, and 1 table.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh mater'yalov i iskusstvennoy kozhi. Kiyevskiy regeneratno-rezinovyiy zavod (All-Union Scientific Research Institute of Layered Materials and Artificial Leather. Kiev Rubber-Reclamation Plant)

SUBMITTED: 00

DATE ACQ: 10Jul63

ENCL: 00

SUB CODE: 00

NO REF SOV: 005

OTHER: 000

Card 2/2

ACCESSION NR: AP4015073

S/0138/64/000/001/0008/0010

AUTHORS: Dinzburg, B. N.; Safray, B. A.

TITLE: Deformation-elasticity properties of porous vulcanized rubbers from rubbers combined with thermoreactive resins

SOURCE: Kaucuk i rezina, no. 1, 1964, 8-10

TOPIC TAGS: vulcanized rubber, porous vulcanized rubber, synthetic resin, thermoplastic resin, thermoreactive resin, polystyrene, phenolic resin, porophore, compression deformation, compression elasticity, phenol formaldehyde resin

ABSTRACT: The present study is a continuation of earlier work, by the authors on the advantages of using thermoreactive synthetic resins rather than thermoplastic resins in the production of porous rubber master batches (Legkaya prom., No. 9, 26, 1958). Under investigation were cylindrical samples, 32 mm in diameter and 20-25 mm high, of SKS-30 rubber, containing 30 parts by weight of either phenol-anilineformaldehyde resin 211 or polystyrene, and 30 parts kaolin, as well as the other usual components of rubber compounds, and the porophore ChKhZ-5. These rubber mounts were subjected to compression deformation studies which revealed that up to a deformation of 50% there existed an approximate linear relationship

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ACCESSION NR: AP4015073

between the extent of rubber deformation and the magnitude of the load. From there on (up to a deformation level of 75) a sharp increase in the load magnitude was required, and beyond 75% the deformation of the samples was no longer affected by an increased load. It was also found that the residual compression of rubbers containing phenolanilineformaldehyde resin was 2-3 times smaller than in the samples containing polystyrene and that the elasticity of the former was also higher, which was attributed to its greater hardness. A study of the behavior of the two samples within a temperature range up to 80C revealed that while the polystyrene-porous rubber exhibited a sharp upturn in the compression deformation curve at the stage of 75% shrinkage, the corresponding curve for the phenolformaldehyde specimen remained practically unaffected. The authors attribute this effect to the thermoreactivity of the phenolformaldehyde resin, which imparts thermostability to the rubber compound. Orig. art. has: 6 charts and 1 table.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh materialov i iskusstvennoy kozhi (All-Union Scientific Research Institute of Layer Materials and Synthetic Leather)

SUBMITTED: 00

DATE ACQ: 26Feb64

ENGL: 00

SUB CODE: MA

NO REF SOV: 005

OTHER: 001

Card 2/2

ACCESSION NR: AP4042338

S/0138/64/000/007/0011/0015

AUTHOR: Dinzbug, B. N., Safry, B. A., Baramboy, N. K.

TITLE: Properties of vulcanizates from NBR rubbers combined with thermosetting resins

SOURCE: Kauchuk i rezina, no. 7, 1964, 11-15

TOPIC TAGS: NBR rubber, phenolic resin, synthetic rubber, novolak resin, resol resin, thermosetting resin, rubber SKN-18, rubber SKN-26, rubber SKN-40, NBR vulcanizate property, phenolic resin effect, urotropin effect, thermosetting master batch method, vulcanizate transparency

ABSTRACT: NBR rubbers SKN-18, SKN-26 and SKN-40 were combined with novolak resins #18, 15 and 17 or resol resins #76, 118, 214, 220, 236 and Bakelite A (100 parts by weight NBR rubber, 2 parts stearin, 5 parts zinc oxide, 2 parts sulfur, 3.5 parts Captax, 3 parts hard resin; urotropin, 0-15 parts by weight of resin) on 200 x 450 mixing rolls (friction 1.33), using standard (20min., roll temp. 30-50C) or thermosetting master batch

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ACCESSION NR: AP4042338

( 20 min. , 150C) methods. The vulcanization temperature was 155C. The vulcanizates were analyzed to determine the effects of the various resins on their properties and the comparative effectiveness of the two different methods. Results are tabulated and graphed (see Enclosure) and indicate that the physical and mechanical properties were improved substantially by addition of phenolic resins and urotropin as the curing agent. Transparent vulcanizates can be obtained with optimal proportions (10 parts by weight to 100 parts of resin) or urotropin. The thermosetting master batch method significantly increased the effectiveness of the use of phenolic resins in NBR rubbers, especially in increasing the strength and cold resistance of the vulcanizates. Orig. art. has: 4 graphs and 4 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh materialov i iskusstvennoy kozhi (All-Union Scientific Research Institute for Film Materials and Artificial Leather)

SUBMITTED: 00

ENCL: 01

SUB CODE: MT

NO REF SOV: 006

OTHER: 004

Card 2/3

ACCESSION NR: AP4042338

ENCLOSURE: 01

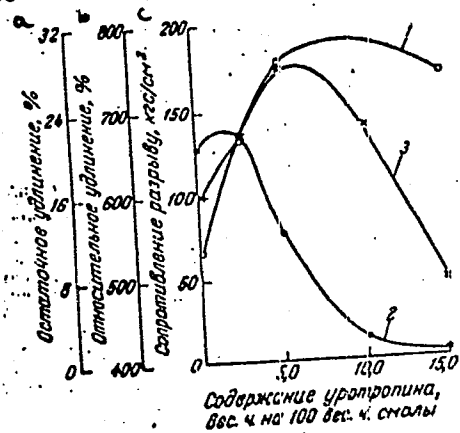


Fig. 1. Effect of urotropin on the properties of vulcanizates of SKN-40 containing resin 18. Ordinate a (curve 3) = residual elongation in %, ordinate b (curve 2) relative elongation in %, ordinate c (curve 1) = rupture strength in kgs/cm<sup>2</sup>; abscissa = content of urotropin in wt. %.

Card 3/3

L 48314-65 EMT(m)/EPP(c)/EWP(j) Po.4/Pr.4 RM  
ACCESSION NR: AP5008128 S/0138/65/000/003/0012/0015

AUTHOR: Dineburg, B. N.; Sefray, B. A.; Baramboym, N. K.; Shtarkh, V. V.

TITLE: The mechanism of rubber reinforcement using thermosetting resins

SOURCE: Kauchuk i rezina, no. 3, 1965, 12-15

TOPIC TAGS: rubber, thermoreactive phenolic resin, resin, strengthening

ABSTRACT: The article presents some results of an investigation of the mechanism of the interaction of butadiene-styrene rubbers with phenol-formaldehyde resins. In studying this mechanism it must be kept in mind that phenol resins and rubber are extremely multifunctional with respect to their reactivity; therefore, it may be assumed that various rubber-resins are formed. It had previously been established that there is in the oxidation products of rubber a considerable number of carbonyl, caroxyl, and other oxygen-bearing groups which apparently can affect the nature of the interaction of rubbers with phenol-formaldehyde resin. A number of samples of SRS-30 rubber were prepared with different degrees of thermooxidative rolling, and their content of peroxide, aldehyde, and carboxyl groups was determined. Electron microscope analysis showed that the particles of resin joined in

23.  
22  
B

Card 1/3

L 48314-65

ACCESSION NR: AP5008128

complexes were spherical formations which could be broken down into two groups: a first group consisting mainly of particles with clear-cut outlines and sizes ranging from 0.15-0.20 microns, and a second group of particles with blurred edges joined in aggregates. The particles of the first group probably do not contain chemically combined rubber whereas the particles of the second group are more complex formations. Based on modern reinforcement theory and considering the data obtained it can be concluded that in the modification of butadiene-styrene rubber with phenol resins by the method of "thermosetting rubber-resin master batches," complex thermomechanicochemical processes occur which lead to the formation of various rubber-resin structures. A new modified rubber (type A) obtained as a result of the interaction of rubber with small additions of phenol resins is reinforced with specific rubber-resin fillers (types B and C) which are highly active because of the similarity of the nature of their surfaces and their ability to form high developed latticed structures. Orig. art. has: 6 figures, 1 table.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh materialov i iskusstvennoy kozhi (All-Union Scientific Research Institute of Film Materials and Artificial Leather)

Card 2/3



L 48314-65

ACCESSION NR: AP5008128

SUBMITTED: 00

ENCL: 00

SUB CODE: MT, GC

NO REF SOV: 012

OTHER: 005

Card 3/3

DINZBERG, B.N., kand. tekhn. nauk; SAPPAY, B.A., kand. tekhn. nauk;  
BARABOYM, N.K., doktor khim. nauk

Studies in the field of the use of condensation resins in  
rubber goods. Report No.3: Effect of the structure of phenol  
resins on the strengthening of butadiene-styrene rubber with  
the thermosetting method of rubber-resin master batches.  
Nauch.-issl. trudy VNIIPK no.14:3-10 '63.

(MIRA 18:12)

SAFRAY, B.A.; DINZBURG, B.N.; YANTOVSKAYA, P.A., red.

[Leatherlike rubber for the sole parts of footwear  
manufactured by the cementing method] Kozhepodobnye ré-  
ziny dlia niza obuvi kleeвого metoda krepneniia. Mo-  
skva, 1964. 39 p. (MIRA 18:9)

1. Moscow. Tsentral'nyy institut nauchno-tekhnicheskoy  
informatsii legkoy promyshlennosti.

DINZE, O.V.

RINZE, O.V. i SHAFRANOVSKIY, K. I.

Matematika v izdaniyakh akademii nauk SSSR (1728-1935). M.-L., Ild. AN (1936).

SO: Mathematics in the USSR, 1917-1947

edited by Kurosh, A.G.,

Markushevich, A.I.

Rashevskiy, P.K.

Moscow-Leningrad, 1948

DINZE, O. V.

DINZE, O. V.

[Aleksai Nikolaevich Krylov] Aleksai Nikolaevich Krylov.  
Moskva, 1945. 63 p. (MLBA 7:5)  
(Krylov, Aleksai Nikolaevich, 1863-1945)

SAROSI, Dezsone; DIOFASI, Lajos

Curing yellowing vine stocks by spraying iron chelate. Agrokem talajtan  
10 no.4:529-538 D '61.

1. Szoleszeti Kutato Intezet, Budapest.

DIOGENOV, G. G.

184T9

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USSR/Chemistry - Alkali Metals

1 Jun 51

"Ternary Mutual System of the Alkalies and Nitrates of Lithium and Potassium," G. G. Diogenov, Irkutsk Med Inst

"Dok Ak Nauk SSSR" Vol LXXVIII, No 4, pp 697-699

Investigated ternary syst by visual-polythermic method. Certain alloys of the syst are suggested as heat-carrying agents for catalytic cracking of petroleum, since high % of lithium compds in these alloys will create exceptionally high thermal capacity, property very essential for heat-carriers. Submitted by Acad G. G. Urazov 26 Mar 51.

184T9

Diogenov, G. G.

Periodicity in the Group of Alkali Metals. G. G. Diogenov.  
(*Doklady Akad. Nauk S.S.S.R.*, 1951, 78, (6), 699-900).—(In Russian). D. tabulates the values (in kg.cal.) of the thermal effects for the systems  $M_1, M_2\text{OH}$ ,  $\text{NO}_2$  for all 10 possible pairs of alkali metals ( $M_1, M_2$ ), arranged in four sets, as follows: (I) Li, Na 11.2; Na, K 6.1; K, Rb 2.0; Rb, Cs 3.0; (II) Li, K 17.3; Na, Rb 7.9; K, Cs 4.7; (III) Li, Rb 19.1; Na, Cs 10.8; (IV) Li, Cs 22.0. Evidently, the values within any set decrease on going from the first pair to the last, but on going from set (I) to set (IV) corresponding values increase; i.e. there is a periodicity in the groups of the Mendeleev system as well as that in the horizontal periods.  
—G. V. E. T.



DIÖGENOV, G. G.

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USSR/Chemistry - Lithium Compounds 1 Aug 52

"Irreversible Mutual System of Potassium and Lithium Chromates and Hydroxides," N. A. Reshetnikov, G. G. Diogenov

"Dok Ak Nauk SSSR" Vol 85, No 4, pp 819-822

The solid soln' of Li,KOH, CrO<sub>4</sub> was investigated and polytherms constructed. The work refers to a series of investigations undertaken for the systematic investigation of alkali-salt exchange without a solvent. This research was completed at the Chair of Gen Chem, Irkutsk Med Inst. Presented by Acad G.G. Urazov 2 Jun 52.

227115

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 Irreversible reciprocal system of sodium and lithium chromates and hydroxides. V. A. Reshetnikov and G. G. Drogotnov (Institute of Med. Inst., Soviet State Obitel, Moscow, U.S.S.R.), *J. S.S.R. Chem.*, 1, 112-26 (1959). -- The reciprocal system Li, Na || OH, CrO<sub>4</sub> was deduced from 2 diagonal and 18 internal cross sections and the 4 binaries. The data are given in 24 tables and 11 diagrams. The binaries Li(OH)-Na(OH) (a) and Li(OH)-Li<sub>2</sub>CrO<sub>4</sub> (b) were detd. for the first time; the binaries Na(OH)-Li<sub>2</sub>CrO<sub>4</sub> (c) and Li<sub>2</sub>CrO<sub>4</sub>-Na<sub>2</sub>CrO<sub>4</sub> (d) were redetd. In a there are 3 transition points at 254, 238, and 299° with 57, 5, and 64.5 mol. % NaOH; 2 compds. of uncertain compn. In b there are 2 congruent compds. 4 LiOH·3Li<sub>2</sub>CrO<sub>4</sub> and LiOH·Li<sub>2</sub>CrO<sub>4</sub>, m.ps. 430 and 460°, resp.; a eutectic at 311° and 2 transition points at 427 and 440° with 45, 64, and 78% Li<sub>2</sub>CrO<sub>4</sub>. In c the polymorphic transition of Li<sub>2</sub>CrO<sub>4</sub> at 440° is underscored; a

congruent compd. Li<sub>2</sub>CrO<sub>4</sub>·Na<sub>2</sub>CrO<sub>4</sub>, m. 412°, and 2 transition points at 353 and 404° with 31.5 and 18.5% Na<sub>2</sub>CrO<sub>4</sub>. In d there are 4 transition points at 304, 300, 380, and 415° with 4.6, 8.0, 16, and 63% Na<sub>2</sub>CrO<sub>4</sub>; 2 compds. 4NaOH·Na<sub>2</sub>CrO<sub>4</sub> and 2NaOH·Na<sub>2</sub>CrO<sub>4</sub>, m.ps. 348 and 423°, resp. The chromate branch above 580° was not investigated. The stable diagonal Li(OH)-Na<sub>2</sub>CrO<sub>4</sub> (I) is characterized by a series of solid solus. with a min. m.p. at 410° (this contradicts established rules of isomorphism and further investigations will be made). The unstable diagonal Na(OH)-Li<sub>2</sub>CrO<sub>4</sub> is an irregular curve with 3 branches intersecting at 300, 292, 285, 321, 243, 340, and 440°. The reaction of the system is expressed by expression 2NaOH + Li<sub>2</sub>CrO<sub>4</sub> = 2LiOH + Na<sub>2</sub>CrO<sub>4</sub>; ΔH = -14.5 kcal. The equl. is shifted toward the stable pair at the left, which justifies the classification of this reciprocal system as irreversible. In the stable triangle Li(OH)-Na(OH)-Na<sub>2</sub>CrO<sub>4</sub> there are 3 fields of crystn.: LiOH·NaOH, 4NaOH·Na<sub>2</sub>CrO<sub>4</sub>, and 2NaOH·Na<sub>2</sub>CrO<sub>4</sub> with 0.47, 1.44, and 4.68% of the projected area, resp.; 3 transition points at 228, 270, and 304°, and a eutectic at 221°. In the stable triangle Li(OH)-Li<sub>2</sub>CrO<sub>4</sub>-Na<sub>2</sub>CrO<sub>4</sub> there are 6 fields of crystn.: 4LiOH·3Li<sub>2</sub>CrO<sub>4</sub>, LiOH·Li<sub>2</sub>CrO<sub>4</sub>, Li<sub>2</sub>CrO<sub>4</sub>·Na<sub>2</sub>CrO<sub>4</sub>, 4LiOH·Na<sub>2</sub>CrO<sub>4</sub>·3Li<sub>2</sub>CrO<sub>4</sub>, and the field Li<sub>2</sub>CrO<sub>4</sub> which is divided by the line of polymorphic transformation into α and β-Li<sub>2</sub>CrO<sub>4</sub> (the resp. areas are: 1.43, 1.23, 3.80, 0.16, 2.23, and 4.35%); and 6 eutectics at 342, 317, 347, 342, 337, and 340°.  
 T. Boucova

DIODENOV, G. G.

USSR.

Ternary system of lithium chloride, carbonate, and sulfate. N. A. Reshetnikov and G. G. Diodenov. *Izv. Akad. Nauk SSSR Ser. Khim. i Geol.* No. 1, 11-16 (1963); *Ref. Zhur., Khim.* 1954, No. 46808.  
 The ternary system Li-Cl-CO<sub>2</sub>-SO<sub>2</sub> was studied by visual polythermal methods. The liquidus diagram of the system had 3 fields of crystal of the components. The ternary eutectic point was at 47.5° and compo. LiCl, 51 and Li<sub>2</sub>CO<sub>3</sub>, 27 mole %. The eutectic of the system LiCl-Li<sub>2</sub>CO<sub>3</sub> was at 407° and 61 mole % LiCl. M. Hosen

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*[Handwritten signature]*

DI GENOV, G. G.

USSR .

The shift of equilibrium in reciprocal systems formed by  
 alkali and alkaline earth metals. G. G. Diogenov (Moscow,  
 USSR. ~~Blagoveshensk~~). ~~Sbornik~~ ~~trudov~~ ~~instituta~~ ~~khimii~~ ~~im. S. P. Solov'eva~~  
 Khim. Akad. Nauk S.S.S.R. 2, 1227-31 (1969).--Equil.  
 between fluorides and chlorides or nitrates and hydroxides of  
 pairs of these salts of an alkali and an alk. earth metal de-  
 pends on the position of the elements in the periodic table.  
 Max. irreversibility is found in reciprocal systems formed  
 from less active alk. earths (e.g. Ca) and most active alkalis  
 (Cs). Min. shift occurs between most active H. and least  
 active Li. The other systems all show characteristic in-  
 termediate shifts of equil. H. M. Leicester

AA 52

DIUGENOV, G. G.

Page 53

USSR/Chemistry - Alkali metals, Periodic System

"The Classification of Mutual Systems Formed of Alkali Metals," G. G. Diugenov, Irkutsk Med Inst., Chair of General and Analytical Chemistry Zhur Obshch Khim, Vol 23, No 1, pp 20-24

The thermal effect of mutual systems formed by alkali metals changes periodically within the limits of groups in Mendeleev's system. The mutual systems possible for alkali metals are classified into 10 types, whereby the type of the mutual system is determined by its position in a table, made up on the basis of the relative proximity of the alkali metals in the periodic table. The less the radius of the anion, the greater the deviation from equilibrium in mutual systems.

257T9

DIODENOV, G.G.

Characteristic properties of alkali-nitrate exchange. Zhur.Obshchey  
Khim. 23, 24-7 '53. (MLRA 6:3)  
(CA 47 no.14:6751 '53)

1. Irkutsk Med. Inst.

DI GENOV, G.G.

Mar 53

USSR/Chemistry - Lithium Salts

"The Irreversible Mutual System Consisting of the Hydroxides and Nitrates of Lithium and Sodium," G.G. Diogenov, Blagoveshchensk Med Inst

DAN SSSR, Vol 89, No 2, pp 305-308

The systems Li, Na // OH, NO were studied and eutectic diagrams prepd. A crystn "tree" comprising triple eutectic points, transitional triple points, transitional double points, and double eutectic points was also prepd. Presented by Acad G.G. Urazov 5 Jan 53.

Source #264T28

DIOGENOV, G.G. (g. Blagoveshchensk-na-Amire)

Distribution of elements in nature and D.I.Mendeleev's periodic system.  
Khim.v shkole 9 no.3:17-24 My-Je '54. (MLRA 7:6)  
(Chemical elements) (Periodic law)



DIUGENOV, G. G.

The ternary system of the acetates of lithium, sodium, and potassium. G. G. Diogenov. *Zhur. Neorg. Khim.* 1, 1551-6 (1957). The system LiOAc-NaOAc-KOAc is characterized by 3 double salts, 4LiOAc.NaOAc (I), 2LiOAc.KOAc (II), and LiOAc.KOAc (III), occupying, resp., 4.3, 22.5%, and 4.84% of the triangular phase diagram. The eutectic points, temp., compns. (m.m. %), and stable solid phases are, resp.: E<sub>1</sub>, 167°, LiOAc 67.0, NaOAc 34.0, KOAc 9.0, NaOAc + I + II; E<sub>2</sub>, 167°, LiOAc 22.0, NaOAc 27.0, KOAc 41.0, NaOAc + II + III. Similarly the peritectic point data are: P<sub>1</sub>, 215°, LiOAc 78.0, NaOAc 9.0, KOAc 13.0, LiOAc + I + II; P<sub>2</sub>, 159°, LiOAc 31.0, NaOAc 25.0, KOAc 44.0, KOAc + II + III. LiOAc undergoes  $\alpha \rightarrow \beta$  transformation at 200°, melts at 291°, and is stable in the liquid phase up to 300°.  $\alpha \rightarrow \beta$  transformations were observed in NaOAc and KOAc at 15-20° below their respective m.ps. C. H. Fuchman.

RM

*Diogenov, G. G.*

DIOGENOV, G.G.; NURMINSKIY, N.N.; GIMEL'SHTMAYN, V.G.

The mutual system of acetates and nitrates of lithium and potassium.  
Zhur.neorg.khim. 2 no.7:1596-1600 J1 '57.                      (MIRA 10:11)

1. Irkutskiy gornometallurgicheskiy institut.  
(Alkali metal nitrates)      (Alkal metal acetates)

AUTHORS: Diogenov, G. G., Yerlykov, A. M. SOV/156-58-3-3/52

TITLE: The Reciprocally Reversible System of the Acetates and Iodides of Sodium and Potassium (Obratimo-vzaimnaya sistema iz atsetatov i iodidov natriya i kaliya)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya tekhnologiya, 1958, Nr 3, pp. 413 - 416 (USSR)

ABSTRACT: The reciprocal system Na, K || CH<sub>3</sub>COO, J was investigated by the visual-polythermal method. (vizual'no-politermicheskim metodom). Since the melting points of NaJ and KJ are comparatively high, only that range of the system which is close to the binary system CH<sub>3</sub>COOK - CH<sub>3</sub>COONa was investigated. The authors investigated; The binary system CH<sub>3</sub>COONa - NaJ (Table 1, Diagram 1). It has a eutectic point at 23 mole% NaJ. The sodium acetate has two polymorphous modifications with the transformation point at 326°C. The binary system CH<sub>3</sub>COOK - KJ (Table 1, Diagram 1) was also investigated. It is analogous to the former system in many respects. Potassium acetate has two modifications, its point of transformation being at

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296°C. The binary system  $\text{CH}_3\text{COONa} - \text{CH}_3\text{COOK}$  (Table 2, Diagram 1) and the binary system  $\text{NaJ} - \text{KJ}$  have been investigated by a number of authors. The diagonal sections were also investigated below the temperature of decomposition of the acetates (360° - 380°):  $\text{CH}_3\text{COONa} - \text{KJ}$  (Table 1, Diagram 2A),  $\text{CH}_3\text{COOK} - \text{NaJ}$  (Table 1, Diagram 2A). In addition, 12 different sections were investigated (Tables 2, 3 and 4, Diagrams 2B, 2C and 3). Diagram 4 shows the projection of the liquidus system  $\text{Na}$ ,  $\text{K} \parallel \text{CH}_3\text{COO}$ ,  $\text{J}$  to the ground square; the single sections are discussed briefly. The eutectic point is at 220°, 38,5%  $\text{CH}_3\text{COONa}$ , 8%  $\text{NaJ}$  and 53,3%  $\text{CH}_3\text{COOK}$ . Another triple point is a point of passage (prokhodnaya tochka): 301°, 74%  $\text{CH}_3\text{COONa}$ , 13%  $\text{CH}_3\text{COOK}$  and 13%  $\text{NaJ}$ . There are 4 figures, 4 tables, and 7 references, which are Soviet.

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The Reciprocally Reversible System of the Acetates  
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ASSOCIATION: **Kafedra** khimii Irkutskogo gornometallurgicheskogo  
instituta (Chair of Chemistry of the Irkutsk Mining and  
Metallurgical Institute )

SUBMITTED: October 30, 1957

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AUTHORS: Gimel'shteyn, V.G., Diogenov, G.G. SOV/ 78-3-7-31/44

TITLE: A Non-Reversible Exchange System of Acetates and Nitrates of Sodium and Rubidium (Neobratimo-vzaimnaya sistema iz atsetatov i nitratov natriya i rubidiya)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 7, pp 1644-1649 (USSR)

ABSTRACT: The exchange system Na, Rb || CH<sub>3</sub>COO, NO<sub>3</sub> was investigated by the visual polythermal method. First the two-component systems CH<sub>3</sub>COONa-CH<sub>3</sub>COORb and CH<sub>3</sub>COORb-RbNO<sub>3</sub> were investigated. In the system CH<sub>3</sub>COONa-CH<sub>3</sub>COORb an incongruent compound is formed (formula CH<sub>3</sub>.COONa.3CH<sub>3</sub>COORb) with a melting point at 180° C. In the second system a congruent compound (formula RbNO<sub>3</sub>.2CH<sub>3</sub>COORb) with a melting point at 202° C is formed. Rubidium acetate, like lithium acetate, sodium- and potassium acetate, has two polymorphous modifications with a point of transformation at 215° C. The melting point of rubidium acetate is increased in the presence of other salts from 236° C to 300° C. There are 3 figures,

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A Non-Reversible Exchange System of Acetates and  
Nitrates of Sodium and Rubidium

SOV/ 78-3-7-31/44

6 tables, and 9 Soviet references.

SUBMITTED: June 28, 1957

1. Sodium acetates--Exchange reactions
2. Sodium nitrates--Exchange reactions
3. Rubidium acetates--Exchange reactions
4. Rubidium nitrates--Exchange reactions

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DIOGENOV, G.G. (g.Irkutsk)

Significance of D.I.Mendeleev's periodic arrangement of the  
elements. Khim.v shkole 14 no.4:10-17 J1-Ag '59.

(MIRA 12:11)

(Periodic law)



18(0)

AUTHOR: Diogenov, G., Candidate of Chemical Sciences, Docent at the Irkutsk Mining and Metallurgic Institute EOY/29-59-2-2/41

TITLE: Metallurgy of the Future (Metallurgiya budushchego)

PERIODICAL: Tekhnika molodezhi, 1959, <sup>21</sup>Nr 2, pp 2-4 (USSR)

ABSTRACT: In this popular-scientific article the author writes about the possibilities of development of metallurgy. The traditional metals have gained more and more importance in modern times. Their extraction increases steadily, and their range of application is steadily extended. For economic reasons, the ores rich in metal are preferred for the extraction. One should, however, consider already now that such ores are exhausted with time, and one will be obliged to use less abundant ones. However, the technical development will ensure that the extraction will be productive if the production costs are reduced and the mineral raw materials are fully worked up, reducing the production waste to a minimum. Such manufacture requires a new technology. First of all, it must endeavor to complete the enrichment processes, and to substitute the pyrometallurgic (high temperature) processes by hydrometallurgic ones. But this

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Metallurgy of the Future

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is only promising if the required solvents are cheap, i. e. if they can be produced during the process. Further, the co-operation of metallurgists and biologists should be considered. It is known that some elements including metals are stored up by plants. Such processes are steadily taking place in nature, but are poorly investigated and have not found practical application yet. One could describe biometallurgy as a step backward, but also this direction is quite real and might be usefully applied, though not generally, but for some rare metals with a scattered occurrence. For 60 years, the conversion process of elements has been known. These processes which had been detected in natural radioactive elements are today taking place on a large scale in atomic piles. It cannot be anticipated what part the conversion of elements will play in the metallurgy of the future. The solution of this problem is reserved to the 21st century. But it is quite as real as the cosmic flight or a peaceful application of thermonuclear energy. Scattered and rare elements can be obtained from sea water and hydrometallurgic solutions by means of filtration with ionites. In this respect, the sea water is particularly interesting as it contains not less than

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50 elements in a dissolved state, and its stores are practically inexhaustible. The interior of the earth has been poorly investigated. The technical development makes it probable that one will also penetrate great depths and will possibly discover abundant metal deposits. History teaches us that metallurgy underwent many transformations in the course of time. For thousands of years, fire has been used for the extraction of metals. Today, some other methods are coming to the foreground. Still, it will take some considerable time until one will develop a really universal and economical method. In modern times, metals have greatly been suppressed by synthetic materials. But they will never lose their importance because of their irreplaceable properties. Industry puts up very distinct demands to metals and alloys which titanium meets in a high degree. But for the time being, its extraction is rather complicated. Such metals as vanadium, niobium, zirconium, tantalum, molybdenum, tungsten, and some other elements of the secondary groups of the periodic system also correspond to the same demands. Technical progress, however, suggests that the difficulties in their extraction will be eliminated, and they may be called the metals of the future. There are 3 figures.

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DIOGENOV, Gennadiy Gerasimovich; GEMBOREK, G.L., red.; KOHNEYEVA, V.I.,  
tekh.red.

[History of the discovery of the chemical elements] Istoriiia  
otkrytiia khimicheskikh elementov; kratkie ocherki. Moskva, Gos.  
uchebno-pedagog.izd-vo M-va prosv.RSFSR, 1960. 231 p.

(MIRA 13:11)

(Chemical elements)

S/078/60/005/009/014/017  
B015/B064

AUTHORS: Nurminskiy, N. N., Diogenov, G. G.

TITLE: The Ternary Reciprocal System of the Acetates and Nitrates  
of Potassium and Cesium

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 9,  
pp. 2084-2087

TEXT: This paper continues the investigations (Refs. 1-3) on the reaction taking place between the acetates and nitrates of alkali metals in melts. The present experiments were conducted according to the polythermal method, applying a Chromel-Alumel thermocouple and a millivoltmeter. Table 1 gives the melting point of the initial substances. System  $\text{CH}_3\text{COOK-KNO}_3$  has already been described (Ref. 2), while system  $\text{CH}_3\text{COOCs-CsNO}_3$  was investigated for the first time (Table 3, Fig. 2), and it was found that a eutectic forms with 25%  $\text{CsNO}_3$  and a melting point at  $142^\circ\text{C}$ . System  $\text{CH}_3\text{COOK-CH}_3\text{COOCs}$  (Table 1, Fig. 2) has a eutectic with a melting point

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The Ternary Reciprocal System of the Acetates  
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at 132°C at a CH<sub>3</sub>COOK content of 28.5%. System KNO<sub>3</sub>-CsNO<sub>3</sub> (Table 1, Fig. 2) ✓  
forms continuously solid solutions with a minimum at 220°C, and system  
NaNO<sub>3</sub>-CsNO<sub>3</sub> forms a eutectic at 47% CsNO<sub>3</sub> with a melting point at 177°C

Table 2 gives a survey of binary systems of the alkali- and alkali-earth  
nitrates with publication data, and mentions the following scientists:  
V. P. Blidin, P. I. Protsenko, N. N. Volkov, G. P. Tumash, G. A. Bukhalova,  
M. L. Sholokhovich, A. G. Bergman, N. A. Pushin, M. Rodonovich, M. N.  
Zakhvalinskiy, N. M. Vaksberg, V. G. Gimel'shteyn, N. P. Popovskaya. Table  
4 gives data on the composition, the phase equilibrium, and the correspond-  
ing melting point for the ternary system. There are 4 figures, 4 tables,  
and 16 Soviet references.

SUBMITTED: June 25, 1959

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DIOGENOV, G.

SURNAME (in caps); Given Names

Country: Bulgaria (Translated from the Russian)

Academic Degrees: not indicated

Affiliation: not indicated

Source: Sofia, Biologiya i Khimiya, No 2, 1961, pp 56-57

Data: "One Hundred Years Since the Discovery of Rubidium  
and Thallium."

DIOGENOV, G.G.; SARAPULOVA, I.F.

Ternary system of sodium, rubidium, and cesium acetates. Zhur.  
neorg. khim. 9 no.6:1499-1502 Je'63 (MIRA 17:8)



DIOGENOV, G.G.; SARAPULOVA, I.F.

Ternary system consisting of the acetates of lithium, rubidium,  
and cesium. Zhur. neorg. khim. 9 no.2:482-487 F'64.

(MIRA 17:2)

DIOGENOV, G.G.; SARAPULOVA, I.F.

System consisting of the acetates of sodium, potassium,  
and rubidium. Zhur. neorg. khim. 9 no.5:1292-1294 My '64.  
(MIRA 17:9)

DI GENOV, G.G.; BRUK, T.I.; NURMINSKIY, N.N.

System Li, Cs || CH<sub>3</sub>COO, NO<sub>3</sub>. Zhur. neorg. khim. 10 no.6:  
1496-1498 Je '65. (MIRA 18:6)

DIOGFNOV, G.S., BORZOVA, L.L.; SARAPULOVA, N.F.

Systems K, Rb, Cs //  $\text{CH}_3\text{COO}$  and Li, Na, Rb //  $\text{CH}_3\text{COO}$ . Zhur.  
neorg. khim. 10 no.7:1738-1739 J1 '65. (MIRA 18:8)