L 18568-66 EWT(m)/EWP(j)/T/ETC(m)-6 WW/RM

ACC NR: AP6002428 (A) SOURCE CODE: UR/0020/65/165/005/1088/1090

AUTHORS: Korshak, V. V. (Corresponding member AN SSSR); Manucharova, I. F.; Frunze, T. M.; Baranov, Ye. L.

ORG: Institute for Heteroorganic Compounds, Academy of Sciences SSSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)

TITLE: Determination of the degree of crystallinity in styrene-ε-caprolactam graft copolymers by a calorimetric method, and the investigation of their thermostability 7,44,54

SOURCE: AN SSSR. Doklady, v. 165, no. 5, 1965, 1088-1090 49

TOPIC TAGS: polymer, crystalline polymer, graft copolymer, polyamide

ABSTRACT: The degree of crystallinity in styrene-ε-caprolactam graft copolymers as a function of the copolymer composition and of molecular weight was determined by a thermogravimetric method. The experimental procedure followed that described by K. A. Andrianov and I. F. Manucharova (Izv. AN SSSR, OKhN, 1962, 420). X-ray pictures of the synthesized polymers are presented. The experimental results are shown in graphs and tables (see Fig. 1). The degree of crystallinity was calculated by the expression G = 2.33 Q, where G is the degree of crystallinity

Card 1/2 UDC: 541.66

L 18568-66

ACC NR: AP6002428

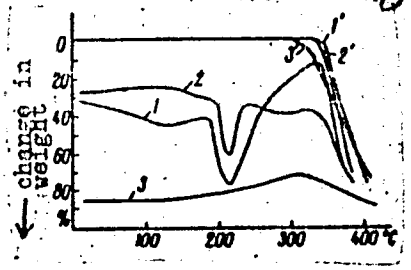


Fig. 1. Curves for weight loss (1', 2', 3') and differential temperature change (1, 2, 3) for the polymers: 1,1'-poly-ε-caproamide; 2,2' graft copolymer, containing styrene and caprolactam in the ratio 20:80 (parts by weight); 3, 3'polystyrene.

in % and Q is the heat of fusion in cal/g. It is concluded that the above formula may be used to determine the degree of crystallinity in any graft copolymers of ε-caprolactam and amorphous co-component. For other starting reagents, the formula differs from the above only in the different value of the empirical constant. Orig. art. has: 1 table and 5 graphs.

SUB CODE:07, 11/SUBM DATE: 30Jun65/ ORIG REF: 019/ OTH REF: 002

Card 2/2 fm

L 22750-66 EWT(m)/EWP(j)/T IJP(c) WW/RM
ACC NR: AP6010109 (A) SOURCE CODE: UR/0190/66/008/003/0455/0460

AUTHORS: Frunze, T. M.; Korshak, V. V.; Baranov, Ye. L.; Lokshin, B.V.

ORG: Institute of Organoelemental Compounds, AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR)

TITLE: Copolymerization of styrene with N-methacryloylcaprolactam in the presence of ε-caprolactam

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 3, 1966, 455-460

TOPIC TAGS: caprone, styrene, copolymerization, copolymer, chain polymer, monomer

ABSTRACT: The copolymerization of styrene with N-methacryloylcaprolactam (MACL) has been investigated. The optimum copolymerization conditions were established. The empirical dependence of the MACL in the copolymer on the amount in the feed mixture was found. The reactivities of these monomers during copolymerization in ε-caprolactam solution were determined. The chain transfer constant through ε-caprolactam was determined. It is shown that ε-caprolactam does not considerably affect the chain growth and that it is a suitable solvent for the reaction. Orig. art. has: 3 figures and 5 tables. [Based on author's abstract] [NT]

Card 1/2 UDC:66.095.26+678.13+678.675+678.746

L 22750-66

ACC NR: AP6010109

SUB CODE: 07/ SUBM DATE: 30Mar65/ ORIG REF: 002/
OTH REF: 003/

Card 2/2 UR

L 22537-66 EWT(m)/EWP(j)/T/ETC(m)-6 IJP(c) WW/RM

ACC NR: AP6010118 (A) SOURCE CODE: UR/0190/66/008/003/0519/0525

55
B

AUTHOR: Korshak, V. V.; Frunze, T. M.; Kurashev, V. V.; Shleyfman, R. B.; Danilevskaya, L. B.

ORG: Institute of Organoelemental Compounds, AN SSSR (Institut elementoorganicheskikh soyedineniy AN SSSR)

TITLE: The use of a trifunctional activator for branched-polyamide synthesis

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 3, 1966, 519-525

TOPIC TAGS: polymerization initiator, polyamide, polymerization, polymer, elasticity, impact strength, caprolactam, lactam

ABSTRACT: N, N', N"-trimesinoyl-ter-caprolactame has been synthesized and was shown to be an effective activator of anionic polymerization of ε-caprolactame, making it possible to produce insoluble polymers. The physical and mechanical properties of these polyamides were analyzed. It was found that they have higher elasticity and impact strength properties than those of linear polyamides prepared in the presence of monofunctional activators. It is shown that the use of a trifunctional activator leads to the formation of branched and crosslinked polyamides. Orig. art. has: 4 figures and 2 tables. [Based on authors' abstract.] [NT]

SUB CODE: 07/ SUBM DATE: 10Apr65/ ORIG REF: 005/ OTH REF: 005/

Card 1/1 BLG UDC: 541.64+678.675

ACC NR: AP6015043 SOURCE CODE: UR/0190/66/008/005/0777/0782

AUTHOR: Korshak, V. V.; Manucharova, I. F.; Izyneyev, A. A.; Frunze, T. M.

ORG: Institute of Organoelemental Compounds AN SSSR (Institut elementoorganicheskikh soyedineniy); Institute of General and Inorganic Chemistry im. N. S. Kunakov, AN SSSR (Institut obshchey i neorganicheskoy khimii AN SSSR)

TITLE: Study of the thermal stability of several new polybenzimidazoles which contain O,P, and B in the chains, and also of mixed polyamido- and polyesterobenzimidazoles by differential thermal analysis

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 5, 1966, 777-782

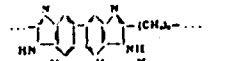
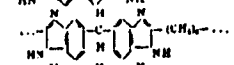
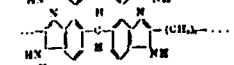
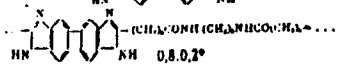
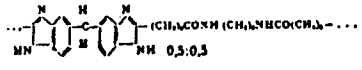
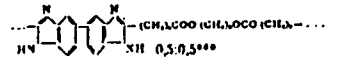
TOPIC TAGS: polymer physical chemistry, chemical stability, thermal stability, chemical decomposition, thermal decomposition

ABSTRACT: The continuous search in the USSR for thermostable and heat-resistant polymers prompted a study of the thermal stability of some newly synthesized polybenzimidazoles. The subjects of the study were the polymers obtained from 3,3'-diaminobenzidine with directly connected benzimidazole groups. and those obtained from 3,3',4,4'-tetraaminodiphenylmethane with benzimidazole groups connected by a $-CH_2-$ bridge. The polymers studied are shown in the two following tables. Table 1 contains data on polybenzimidazples with aliphatic chains, while Table 2 fully describes aromatic polybenzimidazoles or those with heteroatoms in their structure. The synthesis of these polymers was reported previously.

Card 1/6 UDC: 678.01:53+678.6+678.86

ACC NR: AP6015043

Table 1. Thermal Stability of Some Polybenzimidazoles with Polymethylene Chains

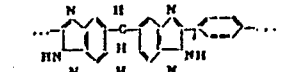
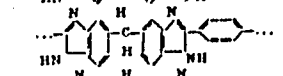
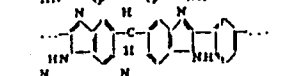
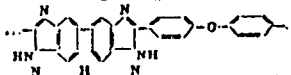
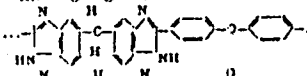
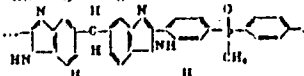
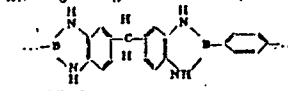
Repeat Unit and Molar Ratio	Losses in Weight, % (in nitrogen stream)					Temperature (temperature of at the start of decomposition, °C	Temperature of a sharp decrease in weight, °C
	Up to 350°	Up to 400°	Up to 450°	Up to 500°	Up to 550°		
	—	—	—	10,6	32,8	460	480
	9,1	9,4	9,7	33,3	56,3	460	470
	—	—	—	29,4	55,0	460	480
 0,8:0,2*	6,4	7,3	7,7	32,9	60,2	440	460
Same 0,5:0,5	4,1	4,9	10,8	49,1	61,3	430–440	460
» » 0,5:0,5**	6,0	6,6	16,6	45,7	56,4	430–440	460
» » 0,2:0,8	10,5	13,8	23,7	92,0	95,2	320	350
 0,5:0,5	11,9	15,9	27,8	97,5	—	320	350
 0,5:0,5***	4,1	8,1	12,2	—	—	340	400

*Molar ratio of the initial components: tetraamine: diamine
**Losses in weight determined in air
***Molar ratio of the initial components: tetraamine: diol

Card 2/6

ACC NR: AP6015043

Table 2. Thermal Stability of Aromatic Polybenzimidazoles and Polybenzimidazoles Containing Heteroatoms

Repeat Unit	Losses in Weight, % (in nitrogen stream)			Temperature of the start of decomposition, °C	Temperature of a sharp decrease in weight, °C
	Up to 500°	Up to 550°	Up to 600°		
	3,4	7,9	15,4	~500	530
	4,8*	6,7*	23,6*	~500	530
	8,2*	15,4*	31,3*	~490	520
	5,4	7,5	10,2	~474	529
	3,4	7,2	16,2	~500	510
	27,5	39,8	47,8	~486	500
	2,6	7,2	12,8	~450	550

*Losses in weight determined in air

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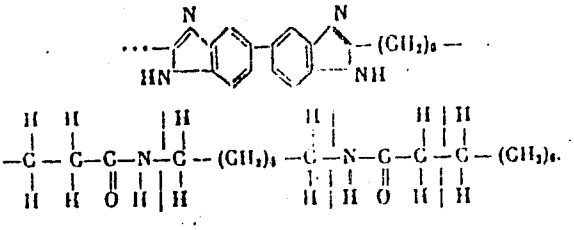
ACC NR: AP6015043

The thermal stability of the above polymers was determined in a nitrogen stream, or, in some cases, in air by using the thermogravimetric method. The tables indicate that the fully aromatic polybenzimidazoles are, in general, more thermally stable than polybenzimidazoles with aliphatic chains. Mixed polybenzimidazoles have an intermediate stability. The $-CH_2-$ bridging group causes a certain rigidity of the polymer structure and, as expected, increases the decomposition temperatures to the 490—500° C range. The introduction of an oxygen atom between two phenylene groups, as, e. g., in the poly-2, 2'-(p-diphenyleneoxide)-5, 5'-dibenzimidazole, brings no improvement and, possibly, even a slight decline in the thermal stability. However, the loss in weight at 600° C seems to be somewhat lower than in the oxygen-free polymer.

Bridging of phenylene groups with a phosphono group, e. g., $CH_3P(O)=$, resulted in an increase of the losses at all testing temperatures, i. e., 500, 550, and 600° C, a decrease in the decomposition temperatures, but imparts incombustibility to the polymer. On heating, volatile products may originate from organic radicals at the P atom. The introduction of boron into the heterocyclic part of the benzimidazole group as, e. g., in a CH_2- bridged polybenzboroimidazoline, results in a thermal stability comparable with that of fully aromatic polybenzimidazoles.

Card 4/6

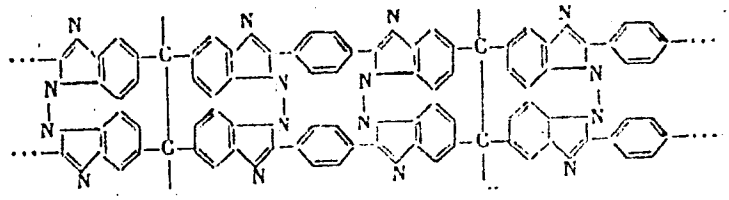
Mixed polyamidobenzimidazoles and polyesterobenzimidazoles (see Table 1) have a lower thermal stability than fully aromatic homopolybenzimidazoles, but are more resistant than the corresponding polyamides or polyesters. The decomposition of the polyamidobenzimidazoles probably takes place at the bonds indicated by the broken lines:



Heating of polybenzimidazoles to 400—320° C at 0.001 mm Hg produces insoluble substances, which can be explained as the formation of three-dimensional network structures by virtue of crosslinking of CH_2 or NH groups.

ACC NR: AP6015043

accompanied by the evolution of H_2. In the first stages of the decomposition the process can be represented as:



The rigidity of the polymers is increased, which results in an increase in thermal stability. Further, a rupture of chains takes place at a deeper decomposition. Orig. art. has: 3 figures and 2 tables. [FSB: v. 2, no. 10]

SUB CODE: 07, 20 / SUBM DATE: 17Apr64 / ORIG REF: 007 / OTH REF: 006

Card 6/6

L 41715-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6019530 (A) SOURCE CODE: UR/0020/66/168/004/0825/0827

AUTHOR: Rode, V. V.; Korshak, V. V. (Corresponding member AN SSSR); Frunze, T. M.; Baranov, Ye. L.; Balykova, T. N.

ORG: Institute of Organoelemental Compounds, Academy of Sciences, SSSR (Institut elementoorganicheskikh soyedineniy akademii nauk SSSR)

TITLE: Thermooxidative destruction of the graft copolymers of styrene with epsilon-caprolactam

SOURCE: AN SSSR. Doklady, v. 168, no. 4, 1966, 825-827

TOPIC TAGS: copolymer, polystyrene, oxidation kinetics, block copolymer, heat resistance, GRAFT COPOLYMER, STYRENE, OXIDATIVE DEGRADATION

ABSTRACT: The kinetics of oxidative degradation of styrene-caprolactam graft copolymers was studied. 0.05 g samples of copolymers containing 10, 20, and 33% styrene were oxidized in an oxygen stream at 300-375°C. It was found that the stability of the styrene-caprolactam copolymers to oxidative degradation increases with increasing content of caprolactam. It was also found that the content of alkaline catalyst in the copolymer has practically no effect on the stability of the styrene-caprolactam copolymer. The kinetic data are graphed and tabulated. Orig. art. has: 2 figures, 2 tables.

SUB CODE: 07/ SUBM DATE: 15Nov65/ ORIG REF: 007/ OTH REF: 003

UDC: 541.66

Card 1/1

[redacted], V.
Surname (in caps); Given Names

Country: Rumania

Academic Degrees: -not given-

Affiliation: Institute of Biochemistry (Institutul de Biochimie), Bucharest.

Source: Bucharest, Stiinta si Tehnica, No 4, 1961, pp 18-19.

Data: "Do the Hormones Activate the Plants?"

FRUNZETI, Viorica; BOTOSANEANU, Lilica; RADULESCU, Sanda

Action of dihydrofolliculin and testosterone on the foliar catalase and the oxygen consumption in the stems of Solanum lycopersicum Anthirrhinum majus. Studii cerc biochimie 4 no.3:357-364 '61.

1. Institutul de biochimie al Academiei R.P.R., Bucuresti.

MACOVSCHI, E., acad.; FRUNZETI, V.; RADULESCU, S.

Migration of pyronine and methylene blue through tomato and balsam stems. Studii cerc biochimie 6 no.1:23-38 '63.

1. Institutul de biochimie al Academiei R.P.R., Bucuresti.

FRUSIN, K.S.

POIEREKA, M.Ya.; FRUSIN, K.S.

Studying internal strains in metals during electrodeposition by the use of a disc cathode and ohmic indicator. Vest. AN Kazakh. SSR 14 no.2:84-91 F '58. (MIRA 11:2)
(Strains and stresses)
(Electrolysis)

AUTHORS: Popereka, M.Ya., Docent, Candidate of Technical Sciences, Fraktor, A.M., Candidate of Technical Sciences, Frusin, K.S., Engineer, Martynenko, A.A., Engineer, Famil'tsev, D.N., Engineer

SOV/32-24-9-50/53

TITLE: On the Determination of the Interior Stress of Galvanic Coatings (Ob opredelenii vnutrennikh napryazheniy v gal'vanicheskikh pokrytiyakh). On the Occasion of the Article by Sh.Z.Zakirov and Yu.N. Petrov, Published in the Periodical "Zavodskaya laboratoriya", Nr 12, 1957 (Po povodu stat'i Sh.Z.Zakirova i Yu.N. Petrova, opublikovannoy v zhurnale "Zavodskaya laboratoriya", Nr 12, 1957g.)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 9, pp 1164-1165 (USSR)

ABSTRACT: The article mentioned in the title contains formulae for the determination of stresses which cannot yield exact results and besides, are not new. This type of calculating stresses was already carried out by M.L. Pertsovskiy (Ref 1), as well as by Brenner and Senderoff (Brener and Senderoff) (Ref 2), and by the authors of the present article. One of the equations mentioned is actually only an alteration of the equation already suggested by Stoney (Ref 4) in 1909. In the further explanations it is mentioned among other facts in this paper that the calculation of Zakirov and

Card 1/2

On the Determination of the Interior Stress of Galvanic Coatings. On the Occasion of the Article by Sh.Z. Zakirov and Yu.N. Petrov, Published in the Periodical "Zavodskaya laboratoriya", Nr 12, 1957

SOV/32-24-9-50/53

Petrov does not make a classification of the stress of the coatings possible. It is also mentioned that the calculation of the stress according to the radius of the curve has a number of deficiencies. It is, for instance, not possible to carry out any measurements during the electrolysis. For these reasons the methods suggested by Pertsovskiy and A.T. Vagramyan and Yu.S. Tsareva (Ref 5) and others are better. Finally the editors mention at the end of this article that they agree in principle with this critical comment. There are 5 references, 3 of which are Soviet.

Card 2/2

POPEREKA, M.Ya.; Prinimal uchastiye: PRUSIN, K.S.

Change of internal stresses in zinc deposits after electrocrystallization. Zhur. prikl. khim. 36 no.8:1748-1756 Ag '63. (MIRA 16:11)

1. Krasnoyarskiy politekhnicheskiy institut.

FRUSOV, L. P.

FRUSOV, L. P. -- "Effect of Fluctuations in Temperature on Resistance to Creep." Cand Tech Sci, Central Sci Res Inst of Technology and Machine Building, Moscow, 1953. (RZhMekh, Apr 54)

FRUYENTOV, N.

Significance of the position of the quaternary nitrogen atom in the molecule of certain substances for their cholinolytic activity and the rate of its development. Izv.AN Latv.SSR no.2:97-101 '64. (MIRA 17:4)

1. Institut evolyutsionnoy fiziologii im. I.M.Sechenova.

FRUENTOV, N. K.

FRUYENTOV, N.K.

Heightening of conditioned reflexes by codeine in nutritional leucocytosis. N. K. Fruentov. *Farmakol. i Toksikol.* 16, No. 6, 18-21(1953).—Codeine phosphate intensified conditioned reflex in nutritional leucocytosis but not as much as did caffeine:NaOBz. EtOH lessens the leucocytosis, but this effect is inhibited by caffeine. Evidently codeine stimulates the cerebral cortex. Julian F. Smith

Military Naval Med. Acad.

FRUYENTOV N.K.

USSR/Medicine - Pharmacophysiology FD-855

Card 1/1 Pub.30 - 6/18

Author : Brekhman, I. I. and Fruyentov, N. K.

Title : The effect of gin-seng on the reactivity of an organism

Periodical : Farm. i toks. 17, 27-30, Jul/Aug 54

Abstract : Experiments showed that subcutaneous injection of milk into rabbits which had previously been administered extracts of gin-seng did not cause fever or leukocytosis. Similar results were obtained in experiments with turpentine. Single or multiple injections of gin-seng, administered prior to freezing the ears of rabbits, prevented the development of as severe inflammations as appeared in control animals. The inflammations which did appear in the treated animals caused hardly any leukocytosis or loss of weight. Administration of gin-seng daily for 21 days prior to freezing, interrupted 2 days before freezing, proved to be even more effective in preventing inflammatory reactions. The experiments are illustrated by two charts and three graphs. No references are cited.

Institution : The Naval Medical Academy

Submitted : --

FRUYENTOV, N.K.

Comparative effect of a preparation of ginseng and other substances on conditioned reflex food leucocytosis in man. Mat. k izuch. shem'-shenia i lim. no.2:100-113 '55. (MLRA 9:10)

(GINSENG--PHYSIOLOGICAL EFFECT) (CONDITIONED RESPONSE) (LEUCOCYTOSIS)

FRUYENTOV, N.K.

Comparative strength of stimulation of conditioned reflex food leucocytosis by ginseng, Schisandra, and pantochrin. Mat. i issled. zhem'-shenia i lim. no.2:120-123 '55. (MLRA 9:10)

(GINSENG--PHYSIOLOGICAL EFFECT) (SCHISANDRA)
(LEUCOCYTOSIS)

FRUYENTOV, N.K.

Effect of ginseng on the intensity of leucocytosis and hyperthermia in rabbits produced by subcutaneous administration of milk and turpentine. Mat. k izuch. zhem'-shenia i lim. no.2: 147-155 '55. (MLRA 9:10)

(GINSENG--PHYSIOLOGICAL EFFECT) (MILK--PHYSIOLOGICAL EFFECT) (TURPENTINE--PHYSIOLOGICAL EFFECT) (LEUCOCYTOSIS)

FRUYENTOV, N.K.

Acceleration of the regeneration of blood in rabbits under the effect of an infusion of ginseng roots. Mat. k izuch. shem'-shenia i lim. no.2:156-159 '55. (MLRA 9:10)

(GINSENG--PHYSIOLOGICAL EFFECT) (ERYTHROCYTES)

FRUYENTOV, N. K.

BREKHMAN, I.I.; FRUYENTOV, N.K.

Effect of ginseng root on endotoxic leucopenia in rabbits. Farm. i toks. 19 supplement:37 '56. (MLRA 10:7)
(LEUCOPENIA) (GINSENG)

FRUYENTOV, N.K.

V

Country : USSR
Catogory : Pharmacology and Toxicology. Analeptics

Abs. Jour. : Ref Zhur-Biol, No 19, 1958, No 89856

Author : Fruentov, N. K.
Institut. : -
Title : On the Effect of Certain Preparations Derived from the Plants of the Aralia Family upon the Hematological Indexes of Reactivity of the*
Orig Pub. : V sb.: Materialy k izuch. zhen'shenya i limonnika. Vyp. 3, L., 1958, 133-140

Abstract : Some members of the Aralia family exert an action upon the animal organism similar to that of ginseng, although to a lesser degree. Thus, a 2.5% infusion of leaves of septemlobus Kalopanax (K) depresses leukocytosis in rabbits, produced by administration of milk. Following the administration of dysenteric endotoxin, C suppresses the leukopenic phase of the reaction; in response to the administration of the endo-

* Organism

Card: 1/2

FRUENTOV, N.K.

COUNTRY : USSR V
CATEGORY : Pharmacology and Toxicology. Cholinergic Agents

ABS. JOUR. : RZhBiol., No. 5 1959, No. 23139

AUTHOR : Semenov, I. V.; Fruentov, N. K.
INST. : Chair of Forensic Medicine, 1st Leningrad*
TITLE : Increase of Anticholinesterase Action and Ability to Produce Bronchial Spasm During Methylsulfomethylization of Some Phosphorus Organic Substances

ORIG. PUB. : Sb. tr. Kafedry sudebn. med. 1-y Leningr. med. in-t, 1958, vyp. 2, 183-187

ABSTRACT : In experiments on cats, it was shown that the imparting of ability for complete ionization to an anticholinesterase phosphorus organic compound by way of methylsulfomethylization of the sulfur atom which is in the β-position leads to an increase of its anticholinesterase action in vitro,

*Medical Institute

Card: 1/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513820012-9

COUNTRY :
CATEGORY :

ABS. JOUR. : RZhBiol., No. 5 1959, No. 23139

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : and to the ability of producing bronchial spasm
cont'd in the cat.

Card: 2/2

FRUYENTOV, N.K.

Significance of the position of a quaternary nitrogen atom in the molecule of certain substances in their reactive capasicty with true and false cholinesterase. Biul.eksp.biol.i med. 48 no.12: 55-61 D '59. (MIRA 13:5)

1. Iz laboratorii farmakologii i biokhimii biologicheski aktivnykh veshchestv (zav. - prof. M.Ya. Mikhel'son) Instituta evolyutsionnoy fiziologii imeni I.M. Sechenova (dir. - akad. L.A. Orbeli [deceased] AN SSSR, Leningrad. Predstavlena deystvitel'nym chlenom AMN SSSR S.V. Anichkovym.
(NITROGEN chem.)
(CHOLINESTERASE chem.)

FURYEN FRUYENTOV, N.K.

FURYENTOV, N. K., MIKHELSON, M. YA., KABACHNIK, M. I., YAKOVLEV, V. A., VOKOVA, R. I., GODOVIKOV, N. N., KAZAZANIK, A. Y., MASTRYUKOV, T. A., ROZHKOVA, YE. K. (USSR)

"The Significance of Onic Group and of its Position in an Anti-Cholinesterase Substance Molecule for its Inter-action with Cholinesterases and for Pharmacologic Effects."

Report presented at the 5th International Biochemistry Congress, Moscow, 10-16 August 1961

RYBOLOVLEV, R.S., FRUYENTOV, N.K.

On the influence of organophosphorus substances on the neuromuscular connection.

Khimiya i Primeneniye Fosfororganicheskikh Soyedineniy (Chemistry and application of organophosphorus compounds) A. YE. ARBUZOV, Ed. Publ. by Kazan Affil. Acad. Sci. USSR, Moscow 1962, 632 pp.

Collection of complete papers presented at the 1959 Kazan Conference on Chemistry of Organophosphorus Compounds.

ZEYMAL, E.V., MIKHELSON, M.YA., FRUYENTOV, N.K.

Proceedings of the section on the physiological activity of organophosphorus compounds.

Khimiya i Primeneniye Fosfororganicheskikh Soyedineniy (Chemistry and application of organophosphorus compounds) A. YE. ARBUZOV, Ed. Publ. by Kazan Affil. Acad. Sci. USSR, Moscow 1962, 632 pp.

Collection of complete papers presented at the 1959 Kazan Conference on Chemistry of Organophosphorus Compounds.

ABRAMOVA, Zh.I., kand. med. nauk; ANICHKOV, S.V., prof.; BELEN'KIY, M.L., prof.; VAL'DMAN, A.V., doktor med. nauk; VEDENEYEVA, Z.I., kand. med. nauk; VINOGRADOV, V.M., kand. med. nauk; GERSHANOVICH, M.L., kand. med. nauk; GINETSINSKIY, A.G., prof.; GORBOVITSKIY, S.Ye., prof.; GREBENKINA, M.A., dotsent; GREKH, I.F., dots.; DENISENKO, P.P., kand. med. nauk; D'YACHENKO, P.K., kand. med. nauk; ZHESTYANIKOV, V.D., kand. med. nauk; ZAUGOL'NIKOV, S.D., prof.; ZEYNAL', E.V., kand. med. nauk; ISKAREV, N.A., kand. med. nauk; KARASIK, V.M., prof.; KIVMAN, G.Ya., kand. med. nauk; KOZLOV, O.D., kand. med. nauk; KROTOV, A.I., doktor veter. nauk; KUDRIN, A.N., doktor med. nauk; LAZAREV, N.V., prof.; LAPIN, I.P., kand. med. nauk; MEL'NIKOVA, V.F., prof.; MESHCHERSKAYA, K.A., prof.; MIKHEL'SON, M.Ya., prof.; MOSHKOVSKIY, Sh.D., prof.; PADEYSKAYA, Ye.N., kand. med. nauk; PARIBOK, V.P., prof.; PERSHIN, G.N., prof.; PLANEL'YES, Kh.Kh., prof.; PONOMAREV, G.A., prof.; POSKALENKO, A.N., kand. med. nauk; MUKHIN, Ye.A., dots.; ROZOVSKAYA, Ye.S., dots.; RYBOLOVLEV, R.S., starshiy nauchnyy sotr.; SALYAMON, L.S., kand. med. nauk; SAFRAZBEKYAN, R.R., kand. biol. nauk; TIUNOV, L.A., kand. med. nauk; TONILINA, T.N., dots.; FELISTOVICH, G.I., kand. med. nauk; FRUYENTOV, N.K., kand. med. nauk; KHAUNINA, R.A., kand. med. nauk; TSYGANOV, S.V., prof.[deceased]; CHERKES, A.I., prof.;

(Continued on next card)

ABRAMOVA, Zh.I.---(continued) Card 2.
CHERNOV, V.A., doktor med. nauk; SHADURSKIY, K.S., prof.; YAKOVLEV, V.Ya., doktor khim. nauk; MASHKOVSKIY, M.D., red.; NIKOLAYEVA, M.M., red.; RULEVA, M.S., tekhn. red.; CHUMAYEVA, Z.V., tekhn. red.

[Manual on pharmacology] Rukovodstvo po farmakologii. Leningrad, Medgiz. Vol.2. 1961. 503 p. (MIRA 15:1)

1. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Anichkov, Karasik, Cherkes). 2. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for Belen'kiy, Ginetsinskiy, Moshkovskiy, Planel'yes).

(PHARMACOLOGY)

VOLKOVA, R.I.; GODOVIKOV, N.N.; KABACHNIK, M.I.; MAGAZANIK, L.G.; MASTRYUKOVA, T.A.; MIKHEL'SON, M.Ya.; ROZHKOVA, Ye.K.; FRUYENTOV, N.K.; YAKOVLEV, V.A.

Chemical structure and biological activity of phosphorus organic cholinesterase inhibitors. Vop. med. khim. 7 no.3: 250-259 My-Je '61. (MIRA 15:3)

1. Laboratory for the Pharmacology and Biochemistry of Biologically Active Compounds, "I.M. Sechenov" Institute of Evolutionary Physiology, Academy of Sciences of the U.S.S.R., and Laboratory of Organophosphorus, Institute of Elementoorganic Compounds, Academy of Sciences of the U.S.S.R., Leningrad.
(CHOLINESTERASES)
(PHOSPHORUS ORGANIC COMPOUNDS)

SMUSIN, Ya.S.; FRUYENTOV, N.K.

Intravital and postmortem diagnosis of poisonings by anti-cholinesterase substances; survey of the literature. Sud. - med. ekspert. 6 no.3:28-33 Jl-S'63. (MIRA 16:10)

1. Kafedra sudebnoy meditsiny (zav. - dotsent Ya.S.Smusin) Chelyabinskogo meditsinskogo instituta i laboratoriya farmakologii (zav. - prof. M.Ya.Mikhel'son) Instituta evolyutsionnoy fiziologii AN SSSR.
(PHOSPHORUS ORGANIC COMPOUNDS — TOXICOLOGY)
(CHOLINESTERASES) (MEDICAL JURISPRUDENCE)

FRUYENTOV, N.K.

Significance of the cationic group and its position in the molecule for cholinesterase interaction with its substrates and reversible inhibitors. Biokhimiia 28 no.6:964-969 N-D'63
(MIRA 17:1)

1. Pharmacological Laboratory, Institute of Evolutionary Physiology, Academy of Sciences of the U.S.S.R., Leningrad.

FRUZINSKI, J.

POLAND/Special and General Zoology - Insects. 0-3

Abs Jour : Referat Zhur - Biologiya, No 16, 1957, 69910

Author : Fruzinski, J.
Inst :
Title : The Spraying of Trees with Wet Dusts.

Orig Pub : Przegl. ogrodn. 1956, 33, No 12, 10

Abstract : No abstract.

Card 1/1 - 56 -

FRUZYNSKI, Jan, inz.

Some data on artificial rain station equipment in Yugoslavia, Czechoslovakia, and the German Democratic Republic. Gosp wodna 22 no.4:149-151 Ap '62.

FRUZYNSKI, Jan, mgr inz.

Is a highpressure pump necessary in tractor-pulled spraying machines? Masz ciagniki 10 no.1:16-18 Ja'63

ACCESSION NR: AP5001458 S/0208/64/004/006/1106/1112

AUTHOR: Fryazinov, I. V. (Moscow)

TITLE: Difference approximation of boundary conditions for the third boundary value problem

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 4, no. 6, 1964, 1106-1112

TOPIC TAGS: approximation, boundary condition, boundary value problem, difference equation

ABSTRACT: The author considers a locally-one-dimensional difference scheme for a parabolic equation in a p-dimensional rectangular parallelepiped $0 < x_\alpha < a_\alpha$, $\alpha = 1,2,\ldots,p$, and for a hyperbolic equation for $p = 2,3$ with type III boundary conditions. This work is supplementary to the work of A. A. Samarskiy (Ob odnom ekonomichnom raznostnom metode resheniya mnogomernogo parabolicheskogo uravneniya v proizvol'noy oblasti. Zh. vy*chisl. matem. i matem. fiz., 1962, 2, No. 5, 787-811). Theorem: Under certain conditions, given in four equations, the solution y of the given difference problem approaches the solution of the problem

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$$\rho(x,t)\frac{\partial u}{\partial t}=\sum_{\alpha=1}^{p}(L_\alpha u+f_\alpha(x,t)),\quad 0<x_\alpha<m_\alpha,\quad 0<t\leqslant T,\quad \alpha=1,2,\ldots,p, \tag{1}$$

$$l_\alpha^0 u|_{x_\alpha=0}=\mu_\alpha^0(x,t),\quad l_\alpha^m u|_{x_\alpha=m_\alpha}=-\mu_\alpha^m(x,t),\quad \alpha=1,2\ldots p, \tag{2}$$

$$u|_{t=0}=u_0(x), \tag{3}$$

$$\begin{aligned}L_\alpha u&=\frac{\partial}{\partial x_\alpha}\left(k_\alpha(x,t)\frac{\partial u}{\partial x_\alpha}\right)+r_\alpha(x,t)\frac{\partial u}{\partial x_\alpha}-q_\alpha(x,t)u,\\ l_\alpha^0 u&=k_\alpha(x,t)\frac{\partial u}{\partial x_\alpha}-\sigma_\alpha^0(x,t)u,\\ l_\alpha^m u&=k_\alpha(x,t)\frac{\partial u}{\partial x_\alpha}+\sigma_\alpha^m(x,t)u,\end{aligned} \tag{4}$$

as $\tau \to 0$, $h_\alpha \to 0$, $\alpha = 1,2,..,p$, at the rate $0(|h|^2) + 0(\tau)$, so that for sufficiently small τ the following estimate is valid

$$|u(x,t)-y(x,t)|\leqslant M(|h|^2+\tau),\quad M=\text{const},\quad 0<\tau\leqslant\tau_0. \tag{5}$$

"In conclusion I express my gratitude to A. A. Samarskiy for his valuable advice and attention to this work." Orig. art. has: 27 formulas.

Card 2/3

L 19003-65
ACCESSION NR: AP5001458

ASSOCIATION: none

SUBMITTED: 13Mar64

SUB CODE: MA

NR REF SOV: 003

0

ENCL: 00

OTHER: 000

Card 3/3

[illegible]

a. [illegible] Contact with [illegible] - V. A. [illegible]

b. [illegible] of the [illegible] Field [illegible] Carried Out from [illegible] over the Territory of the [illegible] - [illegible], [illegible], [illegible], Tyuruina, L. O., I. V. [illegible]

c. [illegible] of [illegible] Reactions to Space Flight Conditions - C. G. [illegible], V. [illegible]

d. On the [illegible] of the [illegible] of the Variable [illegible] With the Constant [illegible] in the Gravitational Field - G. L. GROZDOVSKIY, Y. [illegible], V. V. [illegible]

e. On The [illegible] Solar Corpuscles - V. I. [illegible]

f. Optimum Contour [illegible] Fins Cooled by Radiation - G. L. [illegible]

g. Investigation of Interplanetary [illegible] and Planetary [illegible] by Means of Charged Particle Traps on Space Rockets - K. I. [illegible]

h. Rocket and Satellite Meteoric Dust Investigations - T. N. [illegible]

i. On [illegible] of Cosmic Radiation on Spaceships-Satellites. - S. N. Vernov, V. E. [illegible], N. F. [illegible], I. A. [illegible], P. I. [illegible]. - [illegible]

reports to be presented at the XIIth International Astronautical Congress, Washington D. C. 1-7 October 1961

(19)

30736
S/208/61/001/005/004/007
A060/A126

1.3700 16 6500 16 3500

AUTHORS: Samarskiy, A. A., Fryazinov, I. V. (Moscow)

TITLE: On the convergence of homogeneous difference schemes for the heat-conduction equation with discontinuous coefficients

PERIODICAL: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 1, no. 5, 1961, 806 - 824

TEXT: Considerable literature is devoted to difference methods for solving equations of the parabolic type. A great number of the contributions refers to equations with constant coefficients. The stability and convergence of schemes with continuous, sufficiently smooth coefficients have been studied before by others. The case of discontinuous coefficients leads to considerable difficulties since, as a rule, in the neighbourhood of a discontinuity the difference scheme does not approximate a differential operator. These difficulties may be overcome for the heat conduction equation only with the aid of special a-priori estimates. In earlier contributions (1959, 1960, 1961) Samarskiy introduced the notion of homogeneous difference schemes having one and the same computational algorithm at all the points of the difference grid for all the coefficients of the differential

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On the convergence of homogeneous...

equation for some class of functions. In the present work he considers homogeneous schemes of the skew type for the solution of linear equations of the parabolic type with discontinuous coefficients without an explicit distinguishing of the lines of discontinuity, i.e. without any modification of the scheme in the neighbourhood of the line of discontinuity for the coefficients. Hence, most attention is paid to the problem of convergence of skew schemes in the class of discontinuous coefficients. For a quasilinear equation this problem was studied earlier by Samarskiy. He proved the convergence of a scheme for the case of movable ("skew") discontinuities of the heat-conductivity coefficient assuming that $h^2/\tau \to 0$ as $h \to 0$ and $\tau \to 0$. In the present work this requirement is waived for the linear heat-conductivity equation. The authors introduce the original family of homogeneous difference schemes $\rho^{(\alpha)}_{h\tau}$ and formulate the mixed finite-difference problem. With the aid of a-priori estimates and the principle of maximum, the stability of the schemes as a function of the initial conditions and of the right-hand member is then studied. The case of the symmetric six-point scheme

$$\begin{pmatrix} * & * & * & | & 0.5 \\ * & * & * & | & 0.5 \end{pmatrix} \qquad (\alpha = 0.5)$$

Card 2/4

On the convergence of homogeneous...

is of special interest. For it the stability in the mean value under the initial conditions

$$\|z\|_2 \leq M \|z^0\|_2$$

and the stability as a function of the right-hand member ψ:

$$\|z\|_2 \leq M \|\psi\|_2$$

is proved. These estimates hold for the case when the lines of discontinuity of the coefficients are the straight lines x = const, and the coefficient of heat conductivity k(x,t) and the thermal capacity c(x,t) satisfy the Lipshits condition with respect to t. For the case of a skew discontinuity an a-priori estimate according to the norm of $(z^{2n}, 1)^{1/2n}$, where n = 1, 2, 3, ... The authors conclude by giving the convergence proof for schemes of the family under consideration in the class of discontinuous coefficients, as well as the estimates for the rate of convergence (order of precision) with respect to h and τ. It is proved that the scheme $\Lambda^{(\sigma)}_{h\tau}$ with master functionals

$$A[\psi(s)] = \left[\int_{-1}^{0} \frac{ds}{\psi(s)}\right]^{-1}, \quad D[\psi(s)] = F[\psi(s)] = R[\psi(s)] = \int_{-0.5}^{0.5} \psi(s)ds \qquad (\Lambda)$$

Card 3/4

On the convergence of homogeneous...

has greater precision than other schemes of the family under consideration. There are 16 references: 11 Soviet-bloc and 5 non-Soviet-bloc. The references to the 4 most recent English-language publications read as follows: M. Lees. Approximate solutions of parabolic equations. J. Soc. Industr. Appl. Math., 1959, 7, no. 2, 167 - 183; M. Lees. Apriori estimates for the solutions of difference approximations to parabolic partial differential equations. Duke Math. J., 1960, 27, no. 3, 297 - 311; M. Lees. Energy inequalities for the solution of differential equations. Trans. Amer. Math. Soc., 1960, 94, 58 - 73; H. Keller. The numerical solution of parabolic partial differential equations. Math. methods digital computers. N. Y. - London, 1960, 135 - 143.

SUBMITTED: May 14, 1961

Card 4/4

KALANTAR, N.G.; KRYAZHNOV, V.V.; YEVSYUKOV, Ye.I.; EDEL'SHTEYN, I.Ya.; BONDARENKO, M.F.; Prinimali uchastiye: MANNAFOVA, V.S., mladshiy nauchnyy sotrudnik; YANGURAZOVA, D.I., mladshiy nauchnyy sotrudnik; GABSATTAROVA, S.A., laborant; YUSUPOVA, F.S., laborant KUZ'MINA, A.Ya., laborant

Transformer oil from the distillates of sulfur-bearing eastern crudes. Khim.i tekh.topl.i masel 5 no. 11:15-22 N '60.
(MIRA 13:11)

1. Otdel khimii Bashkirskogo filiala AN SSSR; Novo-Ufimskiy neftepererabatyvayushchiy zavod; Ufimskiy neftyanoy institut.
2. Otdel khimii Bashkirskogo filiala AN SSSR (for Mannafova, Yangurazova, Gabsattarova, Yusupova, Kuz'mina).
(Insulating oil)

FRYAZINOV, I.V. (Moskva)

Stefan's problem for inhomogeneous media. Zhur. vych. mat. i mat. fiz. 1 no.5:927-932 S-O '61. (MIRA 14:10)
(Differential equations)
(Eigenfunctions)

31113
S/208/61/001/006/011/013
B112/B108

16.3900 16,6500 16.3500

AUTHOR: Fryazinov, I. V. (Moscow)

TITLE: Stability of arrays of differences for a heat-conduction equation with variable coefficients

PERIODICAL: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 1, no. 6, 1961, 1122 - 1127

TEXT: The author considers a difference equation $P_{h\tau}^{(\alpha)}z = -\Psi$ which corresponds to the differential equation $c(x,t)\partial u/\partial t = (\partial/\partial x)(k(x,t)\partial u/\partial x) - q(x,t)u$. The array $P_{h\tau}^{(\alpha)}z$ of differences is defined as follows:

$$P_{h\tau}^{(\alpha)}z = \rho(z - z_i^{j-1})/\tau - \alpha L_h^{(k,q)}z - (1 - \alpha)L_h^{(k_i^{j-1},q_i^{j-1})}z_i^{j-1},$$

$$L_h^{(k,q)}z = \left[a_{i+1}^j(z_{i+1}^j - z_i^j)/h - a_i^j(z_i^j - z_{i-1}^j)/h\right]/h - d_i^j z_i^j.$$

The stability of the array $P_{h\tau}^{(\alpha)}$ is investigated by expanding into eigenfunctions. The stability is proved for continuous coefficients a, ρ, d, and, under

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certain restrictions, also for discontinuous coefficients. The following estimate is derived: $\|z - \tilde{z}\|_2 < M\sqrt{1+(\tau/h^2)^2(1-\alpha)^2}\,\|z^0-\tilde{z}^0\|_2$, $0.5 \leqslant \alpha \leqslant 1$. $\|z\|_2$ is defined as $\sqrt{h\sum_{i=1}^{N-1}\rho_i z_i^2}$. N. N. Yanenko and Yu. Ye. Boyarintsev are mentioned. A. A. Samarskiy is thanked for help. There are 7 references: 5 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: J. Douglas. The application of stability analysis in the numerical solution of quasi-linear parabolic differential equations. Trans. Amer. Math. Soc., 1958, 89, No. 2, 484 - 518. J. Douglas. On the relation between stability convergence in the numerical solution of linear parabolic and hyperbolic equations. J. Soc. Industr. and Appl. Math., 1956, 4, 20 - 37.

SUBMITTED: June 24, 1961

Card 2/2

FRYAZINOV, I. V., ZHUZGOV, L. N., PUSHKOV, N. V., TYURMINA, L. O. and DOLGINOV, Sh. Sh.

"Some of the Constant Geomagnetic Field Measurements Carried out from Sputnik III over the Territory of the USSR"

Soviet Papers Presented at Plenary Meetings of committee on Space Research (COSPAR) and Third International Space Symposium, Washington, D. C., 23 Apr - 9 May 62.

44449

S/203/62/002/006/004/020
A160/A101

3.9110

AUTHORS: Dolginov, Sh. Sh., Zhuzgov, L. N., Pushkov, N. V., Tyurmina, L. O., Fryazinov, I. V.

TITLE: Some results of measuring the constant magnetic field of the Earth with the third artificial sputnik of the Earth above the territory of the USSR

PERIODICAL: Geomagnetizm i aeronomiya, v. 2, no. 6, 1962, 1061 - 1075

TEXT: The author presents some results of measuring the constant magnetic field of the Earth with the help of the third Soviet sputnik above the territory of the USSR from May to June 1958. A brief description is given of the metrological properties of the used equipment and of the method of eliminating magnetic board noises from the sputnik magnetograms. It was determined that the deviation may be represented by three harmonics whose mean amplitude values equal $U_{1m} = 1{,}500$, $U_{2m} = 500$ and $U_{3m} = 200\gamma$. A comparison of the measured values of the geomagnetic field intensities with the values of this intensity permitted to establish their agreement within the limits of 0.1 - 1% above a

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major part of the USSR territory, including the Siberian world magnetic anomaly. The conclusion is illustrated by a limited number of typical magnetograms obtained on the segments of the trajectories traversing the whole territory of the USSR. The material yielded by the magnetic investigations with the third Soviet sputnik permits to fully determine the possibilities of carrying out special magnetic experiments. 1) The main harmonics of the Gaussian series can be determined with a precision of 0.1%. 2) With the help of a long-lasting sputnik the real existence of the exterior sources of the magnetic field has to be found out, not taking into consideration the theoretical values of the field, computed from the ground data. 3) Regular work should be done on the secular variation of the geomagnetic field. 4) In order to obtain highly accurate data, the requirements for the complex of auxiliary equipment should be determined. There are 12 figures and 1 table.

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR (Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation, AS USSR)

SUBMITTED: July 10, 1962

FRYAZINOV, I.V. (Moskva)

Difference approximation of boundary conditions for a third boundary value problem. Zhur. vych. mat. i mat. fiz. 4 no.6: 1106-1112 N-D '64. (MIRA 18:2)

L 30071-66 EWT(d)/EWT(l) IJP(c) WW

ACC NR: AP6018630 SOURCE CODE: UR/0208/66/006/003/0487/0502

AUTHOR: Fryazinov, I. V. (Moscow)

46
B

ORG: none

TITLE: On the solution of a third boundary-value problem for the two-dimensional heat conduction equation in an arbitrary domain by a locally one-dimensional method

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 6, no. 3, 1966

TOPIC TAGS: ~~third~~ boundary value problem, heat conduction, ~~equation~~, numerical solution

ABSTRACT: The problem of applying a locally one-dimensional method to solving the boundary-value problem for the two-dimensional heat conduction equation in an arbitrary domain is analyzed. The essence of the method consists in decomposing the boundary conditions in the direction of two coordinate axes and reducing the solution of the two-dimensional problem to the solution of two one-dimensional boundary-value problems. To solve these problems numerically, an implicit uniform finite difference scheme is proposed on the basis of schemes studied by A. A. Samarskiy (Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 2, no. 4 and no. 5, 1962). The problem of the stability and the convergence of schemes is analyzed. The

Card 1/2 UDC: 518.517:944/.947

L 30071-66

ACC NR: AP6018630

accuracy of the difference scheme is derived in the case of an arbitrary domain. In the case of rectangular domains with their sides parallel to the coordinate axes, a finite-difference scheme of higher accuracy is proposed for the heat conduction equation with constant coefficients. It is noted that the proposed method can be generalized to the case of many-dimensional problems. Orig. art. has: 49 formulas. [LK]

SUB CODE: 12/ SUBM DATE: 29Mar65/ ORIG REF: 004/ OTH REF: 001/ ATD PRESS: 5012

Card 2/2

S/065/60/000/011/004/009
E194/E484

AUTHORS: Kalantar, N.G., Fryazinov, V.V., Yevsyukov, Ye.I., Edel'shteyn, I.Ya. and Bondarenko, M.F.

TITLE: \ Transformer Oil From Distillates of Sulphurous Eastern Crudes

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, No.11 pp.15-22

TEXT: Many attempts have been made to produce from sulphurous crudes transformer oils of low sulphur content but this has always led to over-refining so that transformer oil containing about 0.5% sulphur was too acid-forming in the standard oxidation test unless 0.2 to 0.3% imported Topanol O (DBPC) were added to it. The object of the present work was to study the refining of stable transformer oil without the use of inhibitors. Preliminary study of the composition of the sulphur compounds showed that the distillates contained no free sulphur or hydrogen sulphide and that distillates with an initial boiling point above 295 to 300°C did not corrode the copper strip in the oxidation test (14 hours at 120°C with copper and iron catalyst, with flow of oxygen). The work showed that it was not essential to reduce the sulphur

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Transformer Oil From Distillates of Sulphurous Eastern Crudes

content to a very low level and that there was no need to neutralize the dewaxed distillates before solvent treatment. Accordingly, a series of solvent treatment tests were made on Tuymazy transformer oil distillate using from 100 to 300% volume of phenol containing 6% water. Refining was carried out in four stages with an upper temperature of 50°C and lower of 40°C. The raffinates were dewaxed in a solution of 60% methyl ethyl ketone and 40% toluol at 50 to 52°C (presumably minus) part of the dewaxed raffinate was treated with 5% earth and part with 2% of 95% sulphuric acid and 10% earth. All oils were oxidized by the standard test and the results are given in Table 1. The hydrocarbon structural analysis of the various oils produced is discussed, the initial solvent treatment greatly reduces the aromatics and there is a further marked reduction after 200% solvent treatment. There is no substantial reduction in naphthenic structures until 300% phenol treatment is reached. The first 100% phenol removes most of the sulphur that is removed. The results are confirmed by the ultra-violet absorption spectrogram shown in Fig.1. It was concluded that it is irrational to use more than 100 to 150% phenol because

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E194/E484

Transformer Oil From Distillates of Sulphurous Eastern Crudes

this almost completely removes the polycyclic aromatics and impairs the desired ratio between hydrocarbon structures. It is concluded that optimum refining was obtained in the range of 100 to 150% phenol given a sulphur content ranging from 0,7 to 1,0 . A finishing treatment with 2% sulphuric acid did not alter the nature of the oxidation test results, though acid treatment improved the oxidation test results on slightly under-refined oils and impaired them on slightly over-refined oils. The effect of over-refining by solvent treatment alone is described and illustrated with reference to the results given in Table 2 and Fig.2 which relate to trial runs of the refinery. Meanwhile the refinery had succeeded in producing an improved distillate which was a narrower cut that responded better to phenol treatment. The distillate was treated with 135% of phenol and then dewaxed at a temperature of -50°C. The yields and principal properties of the dewaxed oil before and after acid and earth treatment are given in Table 3, the oils fully satisfy the requirements of the standard for transformer oils but the acid treated oil is better in certain respects. Oils refined in this way are particularly

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stable under conditions of corona discharge unlike the normal oils refined with 200% phenol. There are 2 figures, 3 tables and 18 references: 9 Soviet, 8 English and 1 German.

ASSOCIATION: Otdel khimii Bashkirskogo filiala AN SSSR; NU NPZ; Ufimskiy Neftyanoy institut
(Chemistry Department of the Bashkiria Branch of AS USSR; Novo-Ufa Refinery; Ufa Petroleum Institute)

Card 4/4

SOKOLOV, F.A.; FRYAZINOV, V.V.; KLIMENOK, B.V.

Removing paraffins from the filtrates of paraffin production using aqueous solution of carbamide. Izv. vys. ucheb. zav.; neft' i gaz 5 no.7:73-76 '62. (MIRA 16:7)

1. Ufimskiy neftyanoy institut.
(Paraffins) (Urea)

GRUDNIKOV, I.B.; FRYAZINOV, V.V.; AKHMETOVA, R.S.

Viscosity of bitumens at production temperatures. Neftepер. i neftekhim. no.5:18-21 '65. (MIRA 18:7)

1. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefti.

AKHMETOVA, R.S.; FRYAZINOV, V.V., TORBEYEVA, L.R.

Preparation of road bitumen from Arlan oil. Khim. i tekh. topl. i masel 10 no.8:15-19 Ag '65. (MIRA 18:9)

1. Bashkirskiy nauchno-issledovatel'skiy institut po pererabotke nefti.

MESHALOVA, A.N.; FRYAZINOVA, I.B.

Effect of cortisone on immunogenic processes. Report No.4: Comparative study of the reactivity of the body to action of various steroid hormones. Zhur.mikrobiol.epid.i immun. 31 no.8: 23-29 Ap '60. (MIRA 14:6)

1. Iz instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
(CORTICOSTERONE) (CORTISONE) (IMMUNITY)

MESHALOVA, A.N.; BEYLINSON, A.V.; SHAKHANINA, K.L.; FRYAZINOVA, I.B.

Change in the fractional composition of serum globulins and lymph node extracts under the influence of immunization and cortisone. Report No.1. Zh. mikrobiol. 40 no.7:55-61 Jl '63 (MIRA 17:1)

1. Iz Moskovskogo instituta vaktsin i syvorotok imeni Mechnikova i Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

MESHALOVA, A.N.; BEYLINSON, A.V.; SHAKHANINA, K.L.; PRYAZHNOVA, I.B.

Changes in the fractional composition of serum globulins and lymph node extracts under the effect of immunization and steroid hormones. Zhur. mikrobiol., epid. i immun. 40 no.10:26-33 O '63. (MIRA 17:6)

1. Iz Moskovskogo instituta vaktsin i syvorotok imeni Mechnikova i Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

KABANOVA, Ye.A.; FRYAZINOVA, I.B.

Distribution of various types of antigens in the lymphatic system following their subcutaneous injection. Vest. AMN SSSR 19 no.3:17-23 '64. (MIRA 17:10)

1. Institut epidemiologii imeni Gamalei AMN SSSR, Moskva.

ACCESSION NR: AP4022936 S/0248/64/000/003/0049/0058

AUTHOR: Golinevich, Ye. M.; Fryazinova, I. B.

TITLE: Antigonic and immunogenic fractions of "whole" antigens from rickettsial cultures grown in chicken embryos

SOURCE: AMN SSSR. Vestnik, Vol. 19 no. 3, 1964, 49-58

TOPIC TAGS: rickettsial disease, tick-borne fever, typhus, "whole" antigen, antigen fraction, R. prowazeki, R. mooseri, D. sibericus, ammonium sulfate precipitation, complement fixing reaction, typhus vaccine, immunogenic property, allergenic property

ABSTRACT: Rickettsial "whole" antigens of typhus and tick-borne spotted fever grown in chicken embryos have been successfully used in direct and differential serodiagnosis. They have been found equal to corpuscular antigens in quality, easier to prepare, and to contain highly immunogenic properties. However, they cannot be recommended as a vaccine because of the considerable admixture of egg protein. In the present study the antigen fractions were isolated from "whole" antigens (R. prowazeki, R. mooseri, and D. sibericus) by precipitation with varying amounts (15 to 35%) of ammonia sulfate and the antigenic,

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ACCESSION NR: AP4022936

immunogenic, and allergenic properties of the lysate protein fractions and "whole" antigens were compared. Antigen activity was determined by complement fixing reaction. Immunogenic properties were determined by reactions of immunized guinea pigs to virulent culture inoculations a month after immunization. Allergenic properties were based on skin reactions of guinea pigs to subcutaneous injections. Findings show that R. prowazeki "whole" antigens (5.58 mg/ml protein or 798 micrograms/ml nitrogen) precipitated with 25% ammonium sulfate produces the purest antigen fraction with minimum quantities of protein (0.338 mg/ml or 22 micrograms/ml nitrogen) and can be recommended as a typhus vaccine. Antigen fractions of R. prowazeki and D. sibericus "whole" antigens produced by precipitation with 25 and 35% ammonium sulfate cause specific allergic reactions and can be used as allergens. Orig. art. has: 9 tables.

ASSOCIATION: Institut epidemiologii i mikrobiologii im. N. F. Gamalei, Moscow (Epidemiology and Microbiology Institute)

SUBMITTED: 05Aug63 ENCL: 00

SUB CODE: LS NR REF SOV: 003 OTHER: 002

Card 2/2

MESHALOVA, A.N.; BEYLINSON, A.V.; SHAKHANINA, K.L.; BRYAZINOVA, I.B.

Change in the fractional composition of globulins and lymph node extracts under the effect of immunization and steroid hormones. Report No.3. Correlation of the immunity reaction with the change in blood serum and lymph node extracts. Zhur. mikrobiol., epid. i immun. 41 no.9:81-87 S '64. (MIRA 18:4)

1. Moskovskiy institut vaktsin i syvorotok imeni Mechnikova i Institut epidemiologii i miktorbiologii imeni Gamalei AMN SSSR.

SHUMAKOVA [illegible]; PRYAZHNOVA, I.B.

Effect of deposition on the distribution of total antigen from Gartner's culture, labelled with carbon (C14). Zhur.mikrobiol., epid. i immun. 42 no.2:8-13 F '65. (MIRA 18:6)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

L 62623-65 EWT(1)/EWA(j)/EWA(b)-2 JK

ACCESSION NR: AP5011283 UR/0016/65/000/004/0096/0101

AUTHOR: Klimentova, A. A.; Fryazinova, I. B. 17 16 15

TITLE: Immunogenesis and cellular reactions of lymph nodes under conditions of vitamin C deficiency

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 4, 1965, 96-101

TOPIC TAGS: animal, guinea pig, immunology, vitamin C, vitamin deficiency, lymph node, antibody, antigen, complement fixation

ABSTRACT: The effect of a vitamin C deficiency on antibody formation in regional lymph nodes was investigated in guinea pigs in two experimental series using a corpuscular antigen and a soluble antigen. Control animals were maintained on a Lecoq diet and a 30 mg. daily dose of ascorbic acid. A vitamin C deficiency was induced in the experimental animals by a Lecoq diet with the daily dose of ascorbic acid reduced to 0.5 mg in the first series, and 0.3 mg in the second series. Animals of the first series were immunized with a corpuscular Rickettsia mooseri antigen and animals of the second

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L 62623-65
ACCESSION NR: AP5011283

series were immunized with a soluble diphtheria anatoxin to determine complement fixation reactions. Groups of animals were killed at periods of 1 to 25 days following immunization. Body weight changes, blood serum protein fraction levels, ascorbic acid levels of organs, antibody titer fluctuations of lymph nodes and blood, and cellular changes of lymph nodes served as indices. Results show that in the first series, complement fixing antibodies were found in the regional lymph nodes and blood by the 3d day and reached a peak by the 5th day. The antibody level of the blood was considerably higher than that of the regional lymph nodes, and remained high up to the 15th day. In the first series, the vitamin C deficiency tended to increase antibody formation slightly compared to control animals. In the second series, diphtheria antitoxin levels of the regional lymph nodes and blood were similar to those of control animals, but appeared a few days later and titers were slightly higher. On the basis of present findings, the immunological response of animals does not appear to be significantly affected by a vitamin C deficiency. Orig. art. has: 2 figures a 1 table.

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L 62623-65
ACCESSION NR: AP5011283

ASSOCIATION: Institut epidemiologii i mikrobiologii im. Gamalei AMN SSSR (Institute of Epidemiology and Microbiology AMN SSSR)

SUBMITTED: 06Mar64 ENCL: 00 SUB CODE: LS

NR REF SOV: 011 OTHER: 005

Card 3/3

VASIL'YEV, O.F.; GODUNOV, S.K.; PRITVITS, N.A.; TEMNOYEVA, T.A.; FRYAZINOVA, I.L.; SHUGRIN, S.M.

Numerical method for calculating the propagation of long waves in open river beds and its application to the flood problem. Dokl. AN SSSR 151 no.3:525-527 Jl '63. (MIRA 16:9)

1. Institut gidrodinamiki Sibirskogo otdeleniya AN SSSR. Predstavleno akademikom P.Ya.Kochinoy.

FRYBA J.

CZECHOSLOVAKIA/Microbiology - Microbes Pathogenic for Man and Animals. Bacteria of the Intestinal Group. Bacteria. F

Abs Jour : Ref Zhur Biol., No 22, 1958, 99404

Author : Fryba, J.
Inst : -
Title : Destruction of Salmonella in the Refuse of Swine and Poultry Farms.

Orig Pub : Veterinarstvi, 1958, No 3, 90-91

Abstract : No abstract.

Card 1/1

FRYBA, J.

The glider Spartak closely observed.

p. 578 (Kridla Vlasti. No. 19, Sept. 1957. Praha, Czechoslovakia)

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

FRYBA, J.

The L-21 Spartak, the new Czechoslovak glider.

p. 8 (Skrzydlata Polaka) Vol.13, no. 42, Oct. 1957, Warszawa, Poland

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

FRYBA, J.

In whose service is Mr. "bo?"

P. 2. (KRIDLA VLASTI) (Praha, Czechoslovakia) No. 3, Feb. 1958

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

1(6)

CZECH/3-59-8-17/36

AUTHOR: Frýba, Josef

TITLE: New Glider for SVAZARM Aeroclubs (Nový větroň Aeroklubům SVAZARMU)

PERIODICAL: Křídla Vlasti, 1959, Nr 8, pp 14 and 15 (CSR)

ABSTRACT: Article deals with a new ČSR glider L-13 "Blaník". It was designed by a collective headed by Eng. Ladislav Smrček at the Strojírny První Pětiletky (Aircraft Plant) in Kunovice near Uherské Hradiště. This plant still serially produces the Aero-45 and presently is beginning the production of the L-200 "Morava" aircraft. The L-13"Blaník" is all-metal in construction, two seat glider. The first series of ten L-13"Blaník's" are, at present, undergoing flight tests. František Kdér, SVAZARM Central Committee Inspector and Jaroslav Kumpošt, Master of Sport, test flew the aircraft. There are 11 photos.

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30(6)

CZECH/3-59-11-10/36

AUTHOR: Frýba, Josef

TITLE: About National Glider Championships (Z národních plachtařských soutěží)

PERIODICAL: Křídla Vlasti, 1959, Nr 11, pp 8 and 9 (CSR)

ABSTRACT: Author comments on the ČSR Gliding Championship held in 1923, 1924 and 1925. There are 6 photos.

Card 1/1

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AUTHOR: Frýba, Josef

CZECH/3-59-16-19/28

TITLE: No Records Set By Women Either

PERIODICAL: Křídla Vlasti, 1959, Nr 16, pp 18-23 (CSR)

ABSTRACT: This is a report on the 2nd (1959) ČSR, All-State Glider Championship for Women held from 21 June to 5 July 59 at the Vrchlabí Glider Training Center. In the introduction, the fact that the ČSR is the only country with a contest is pointed out. A total of 11 women participated in the 1959 Championship, i.e. 5 less than in the previous year. The following women participated: Veronika Švehlová (České Budějovice Aeroclub), Věra Hudcová, Eva Vrbacká, Stanislava Knappová (all from the Brno Aeroclub), Věra Šlechtová (Vrchlabí Glider Training Center), Vlasta Brečková (Žilina Aeroclub), Božena Tlapáková-Kosková (Liberec Aeroclub), Jaroslava Prokopová (Prague-Vicinity Aeroclub), Alena Šplíchalová (Jihlava Aeroclub), Agnesa Slobodová

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CZECH/3-59-16-19/28

No Records Set By Women Either

(Bratislava Aeroclub), and Jindra Paušová (Ústí nad Labem Aeroclub). Jaroslav Kumpošt, one of the leading male glider pilots in the ČSR, took part in the Championship outside of the official competition. He used an L-21 "Spartak" glider, whereas all women pilots flew VT-425 "Šohaj" gliders. The overall winner was Božena Tlapáková-Kosková, followed by Eva Vrbacká and Agnesa Slobodová. Veronika Švehlová reached the highest average speed flown by any of the contestants by covering 152 km in 2 hours, 42 minutes, 37 seconds, i.e. 56,04 km/h. The Championship consisted of 7 events which comprised flying over distances of from 100 to 326 km. The longest distance actually covered was 297 km, the next longest distances reached were 215, 207, and 199 km. No new records were set in 1959 as compared to 1958, when 3 ČSR national records were broken in addition to the fulfillment of the requirements for the winning

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No Records Set By Women Either

of an FAI Gold Medal by Jindra Paušová. The average performance with respect to the points accumulated was nevertheless higher than in 1958. The unsteady performance of the contestants in the various events is criticized by the author, who also feels that most of the contestants were too cautious and lacked experience in speed flying. Some of them allegedly were also not sufficiently familiar with navigation. Václav Bauml was the general manager of the Championship and František Tůma the flight director, while František Ferra acted as the dispatcher. Dr. Ladislav Háza served as a meteorologist and Karel Kulhánek, a former glider pilot, operated the tow aircraft employed during the Championship. Lt. Col. Echtner, the chief of the glider section OLPS of the Central SVAZARM Committee, made the opening speech and also presented the trophies. A delegation

Card 3/4

No Records Set By Women Either

of the Hungarian sports organization "Magyar Honvédelmi Sportszövetség" observed the Championship. There are 20 photos.

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1(6)

CZECH/3-59-15-10/32

AUTHOR: Frýba, Josef

TITLE: No Records at Vrchlabí This Year

PERIODICAL: Křídla Vlasti, 1959, Nr 15, pp 6-10 (CSR)

ABSTRACT: This is a continuation of the report on the 4th (1959) ČSR All-State Glider Championships held at Vrchlabí in May/Jun 59. In this article, the 2nd half of the Championship is described. The following ČSR glider pilots are named as participants: Josef Havránek, Milan Svoboda, Tadeas Walla, Staněk, Hudoba, Cábel, Rudolf Měšťan, Gustav Vrbacký, Vladislav Zejda, Šmehýl, Vořechovský, Mojmír Stratil, Beneš, Moučka, Navrátil, Václav Štěpánek, Václav Mareček, Trojáček, Jaroslav Kumpošt, Čihák, Kučera, Sarson, Jílek, Adolf Kašparovský, Gejza Markovič, Oravec, and Flašík. The SZG was represented by glider pilots Opitz, Greif, Berndt, and Adolf Daumann. In addition, the Polish glider pilot Jerzy Popiel took part in the final contests. The article also contains the names of

Card 1/3

No Records at Vrchlabi This Year

CZECH/3-59-15-10/32

Jiří Kobrle and Cenkovič, a voluntary worker at the Vrchlabí Gliding Center's cable winch station; both acted as ground helpers during the Championship, while Kopáček acted as the chief meteorologist. The "VT 425-Šohaj" gliders were mostly used by the Czechs but several "Démants" and two "Spartak " gliders were also used. The Germans used "Libelle" gliders, and the Pole, Jerzy Popiel, flew a "Blaník" glider. "Čáp" and "Z-226 Bohatýr" monoplanes were employed as tow-aircraft. The over-all winner of the Championship in the "standard" category, in which only "Šohaj" gliders were flown, was Tadeas Walla, followed by Milan Svoboda and Josef Havránek. In the "free international" contest, Rudolf Měštan was the final winner, with Vladislav Zejda and Václav Mareček taking the 2nd and 3rd place respectively. The longest distance flown during the Championship was 376 km (reached by a "Spartak" glider), whereas a speed record of 100.6 km/h. was set by a "Démant" glider. Summarizing, the author praises the improved performance in the "Šohaj" category, but he is evidently dissatisfied as far as the over-all results are concerned.

Card 2/3

No Records at Vrchlabí This Year

CZECH/3-59-15-10/32

There are 14 photos.

Card 3/3

FRYBA, L.; HORAK, J.

Fractionated sialography. Cesk. rentgen. 17 no.2:128-131 Mr '63.

1. Stomatologicke oddeleni Ustredni vojenske nemocnice v Praze, vedouci MUDr. L. Fryba Rentgenologicke oddeleni Ustredni vojenske nemocnice v Praze, vedouci MUDr. F. Sykora.
(SALIVARY GLANDS) (CONTRAST MEDIA) (RADIOGRAPHY)

FRYBA, L.

"An infinitely long beam on elastic foundations under a moving load."

p. 105 (Institute of Mathematics, Czechoslovak Academy of Sciences) Vol. 2, no. 2, 1957

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 5, May 1958

FRYBA, L.

Dynamic stresses in rails.

p. 10 (Zeleznicni Technika. Vol. 5, no. 1, Jan. 1957. Praha, Czechoslovakia)

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

FRYBA, Ladislav, inz., Dr.Sc.

New method of calculating the strength of rails. Zel dop tech 9 no.7:217-218 '61.

FRYBA, Ladislav, inz., Dr.Sc.

Dynamic effects of electric and Diesel locomotives on steel bridges. Zel dop tech 10 no.9:574-576 '62.

FRYBA, Ladislav, inz., Dr.Sc.

A railway bridge with prestressed screws and its load test. Inz stavby 11 no.3:101-105 Mr '63.

1. Vyzkumny ustav dopravni, Praha.

FRYS, Ladislav, inzh. doktor tekhnicheskikh nauk

Experimental research on the dynamic effect of the new type locomotives on large span metallic bridges. Acta techn Cz 9 no.1:67-95 '64.

1. Issledovatel'skiy institut transporta, Praha 1, Hybernska ulice 5.

-FRYBA, Ladislav, doc. inz. DrSc.

"Handbook of engineering mechanics." Reviewed by Ladislav Fryba.
Inz stavby 12 no. 3:132 Mr '64.