MEL'NIKOVA, M.M., assistent

Hyaluronic acid and hyaluronidase in some gynecological diseases.
Zdrav. Turk. 5 no.5:6-11 S-O '61. (MIRA 14:12)

1. Iz kafedry akusherstva i ginekologii (zav. - dotsent M.S.Seyradov) Turkmenskogo gosudarstvennogo meditsinskogo instituta imeni I.V. Stalina (nauchnyye rukovoditeli - prof. A.B.Preysman i zav. biokhimicheskoy laboratoriyey doktor biologicheskikh nauk B.S.Kasavina).
(HYALURONIC ACID) (HYALURONIDASE)

MEL'NIKOVA, M.M., assistent

Second All-Union Conference on the Pathology and treatment of terminal States. Zdrav. Turk. 6 no.1:43-45 Ja-F '62. (MIRA 15:4)

1. Akusherstvo-ginekologicheskaya klinika Turkmenskogo meditsinskogo instituta.

(DEATH, APPARENT) (RESUSCITATION)

MEL'NIKOVA, M.M.

Genital tuberculosis according to materials from the Republic Hospital. Zdrav. Turk. 6 no.3:18-23 My-Je '62. (MIRA 15:6)

1. Iz kafedry akusherstva i ginekologii (zav. - dotsent M.S. Seyradov) Turkmenskogo gosudarstvennogo meditsinskogo instituta i Respublikanskoy klinicheskoy bol'nitsy imeni N.I. Pirogova (glavnyy vrach M.B. Shapiro).
(GENERATIVE ORGANS, FEMALE—TUBERCULOSIS)

(MIRA 18:10)

MEL'NIKOVA, M. P.

Chemical Abst.
Vol. 48 No. 4
Feb. 25, 1954
Biological Chemistry

• Preparation of 6-phosphofructokinase in highly purified form. S. A. Nefakh, M. P. Mel'nikova, and F. V. Mozhaiko. *Doklady Akad. Nauk S.S.S.R.* 91, 557–60 (1953).—The following scheme yields 6-phosphofructokinase in the form of almost homogeneous catalytically active protein. The back and hind leg muscles of killed rabbit are minced in the cold and extd. 30 min. with 1 vol. cold H_2O, then with 0.5 vol. cold H_2O 15 min. The exts. are filtered through cloth, treated with $(NH_4)_2SO_4$ until 0.3 satd., filtered and the filtrate is treated with $(NH_4)_2SO_4$ until 50% satd., yielding a filtrate with pH 5.8–6.0. The filtrate is now discarded and the ppt. taken up in H_2O. Adjustment with 5% NH_4OH to pH 8–8.2 is followed by agitation 2–3 min. at 57°, followed by rapid cooling. The flocculent ppt. of protein matter is filtered off by suction and discarded. The filtrate is acidified with 0.5*M* AcOH to pH 5–5.2 and the ppt. of denatured proteins is filtered off and discarded. The filtrate is immediately adjusted with 5% NH_4OH to pH 6.8–7.0 and treated with satd. $(NH_4)_2SO_4$ previously adjusted to pH 8.3–8.5 with NH_4OH, adding 0.8 vol. sulfate soln. to 1 vol. filtrate, thus achieving 0.44 level of satn. The ppt. formed is the most active protein fraction. Its activity is detd. readily by detn. of the amt. of fructose-1,6-diphosphate formed from fructose-phosphate with the aid of pure aldolase in conjunction with NaCN to capture the triose phosphate formed. The above purification scheme permits concn. of the enzyme by a factor of 25. Ultracentrifugal examn. of the final product gave sedimentation const. $S = 6.88 \times 10^{-13}$ sec. Thus the product is a globulin, with mol. wt. approaching that of serum γ-globulins. A widening of the sedimentation

peak suggests admixt. of some partially denatured protein. The enzyme has optimum activity at pH 7.2–7.3. Dissocn. const. of enzyme-substrate complex is $1 \times 10^{-3} M$. Molar activity at 37° is low: some 300 moles of substrate per 10^6 g. protein. The enzyme is free of other enzymic activity expect myokinase and phosphohexose isomerase; it also is capable of transfer of phosphate from adenosine triphosphate to glucose-6-phosphate. Complete removal of phosphoisomerase was achieved by a second heat treatment at 58°, which completely inactivated the latter enzyme, while 73% kinase activity was retained. The product was active thus in phosphate transfer from adenosinetriphosphate to fructose-6-phosphate but not to glucose-6-phosphate. The trace of myokinase could not be removed.

G. M. Kosolapoff

MEL'NIKOVA, M. P.

Dir. Biochemistry

The nature and properties of 6-phosphofructokinase of muscles. M. P. Mel'nikova and S. A. Neifakh (Inst. Exptl. Med., Acad. Med. Sci. U.S.S.R., Leningrad). *Biokhimiya* 19, 425–36(1954).—By sedimentation and diffusion methods the mol. wt. of 6-phosphofructokinase (PFK) was found to be 120,000 ± 10%. The content of this enzyme in wet muscle ranges between 0.3 and 0.5%. The activity of the enzyme is related to the presence in the protein of free thiol groups and of Mg ions in soln. The inhibitory action of citrate, adenylic acid, sulfhydryl poisons, and 2,6-dichloroindophenol was studied. The kinetics of the action of PFK was investigated. The catalytic consts. of the enzyme were detd., $K_m \approx 10^{-4}$ *M*, and the turnover no. ≈ 350; Q_{CO_2} = 35–58 μl gas/hr./mg. dry tissue; energy of activation 6200 cal./mole. The enzyme activity per g. of rat rhabdomyoblastoma is 1.6 times as high as in normal skeletal tissues. B. S. Levine

MELNICOVA M. P.

U.S.S.R. / Human and Animal Physiology. Metabolism. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 21923.

Author : Neyfakh S. A., Melnicova M. P.
Inst : Not given.
Title : Enzymatic Groups Determining the Maximum Rate of Glycolysis.

Orig Pub: Ezhegodnik. In-t experim. med. acad. med. nauk SSSR, 1956, 218-219.

Abstract: The rate of glycolysis in a system of dialysed muscle extract (rabbit muscles), substrata (glycogen, glucose, fructose-6-phosphate), coenzymes (ATF, Cozymase, $MgSo^4$ inorganic phosphate) and stabilizer of glycolysis, reached a maximum at a definite optimal concentration of coenzymes and produced 8-12 micromoles of lactic acid in 1 hr. per 1mg of protein of muscle extract.

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MEL'NIKOVA, M. P. and S. A. MEDVAKH

"On enzymatic [illegible]"

The Chemistry and Metabolism of Carbohydrates in Animal and Plant Organisms Conference in Moscow, January [illegible] January [illegible]

(VAN) [illegible]

EXCERPTA MEDICA Sec 2 Vol 12/2 Physiology Feb 59

645. ENZYMATIC LINKS RESPONSIBLE FOR THE HIGHEST RATES OF GLYCOLYSIS IN MUSCLE (Russian text) - Neufach S. A. and Melnikova M. P. Dept. of Biochem., Inst. of Exp. Med., Leningrad, USSR - BIOKHIMIYA 1958, 23/3 (440-452) Graphs 9 Tables 3

It is assumed that rates of glycolysis may be governed by different factors under varying functional conditions of the cell and varying levels of glycolysis. The maximal level for rates of glycolysis in muscle in situ (about 1,500 μM lactic acid/g./hr.) can be reproduced in vitro by means of a reconstructed system consisting of dialysed muscle extract ATP, DPN, Mg, fructose-1-6-phosphate, orthophosphate, nicotinamide, cysteine and glycogen. When the rate of glycolysis follows a linear course, the 'slowest' enzyme of glycolysis may be identified directly by the acceleration of the process which occurs on introducing the purified enzyme. It is shown that none of the enzymes aldolase, 3-phosphate-dehydrogenase or lactic dehydrogenase, hitherto believed to be the slowest enzymes of glycolysis, act as such in reality when their activity is displayed in a medium with sufficient coenzyme content. This is the condition prevailing in the body when muscle activity is great. Depending on the value of 6-phosphofructokinase (PFK) activity a 4- to 8-fold increase in the rate of glycogen degradation follows, when purified PFK is introduced. Linear growth of the effect accompanies increasing increments of PFK. The rate of glucose degradation may even increase to 10-14 times the original value when purified hexokinase has been introduced. The same result has been obtained with a fresh, non-dialysed muscle extract. It is suggested that as the rate of glycolysis in skeletal muscle depends upon PFK activity it is a function of HK in nervous tissue, heart, erythrocytes and tumours.

MELNIKOVA M.P. KAZAKOVA, T.B., TUROVSKY V.S., NEYFAKH S.A. (USSR)

"The Mechanism of the Glycolysis-Accelerating Action of Mitochondria "

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

NEYFAKH, S.A.; KAZAKOVA, T.B.; MEL'NIKOVA, M.P.; TUROVSKIY, V.S.

"Membrane" mechanism of the regulation ofthe glycolysis rate in cells. Dokl.AN SSSR 138 no.1:227-230 My-Je '61.
(MIRA 14:4)

1. Institut eksperimental'noy meditsiny Akademii meditsinskikh nauk SSSR. Predstavleno akademikom V.A.Engel'gardtom.

(GLYCOLYSIS) (MILOCHONDRIA)

MEYFAKH, S.A.; GAYTSKHOKI, V.S.; KAZAKOVA, T.B.; MEL'NIKOVA, M.P.; TURKOVSKIY, V.S.

Chemical nature of the mitochondrial factor stimulating glycolysis. Dokl.AN SSSR 144 no.2:449-452 My '62. (MIRA 15:5)

1. Institut eksperimental'noy meditsiny Akademii meditsinskikh nauk SSSR. Predstavleno akademikom A.I.Oparinym.
(GLYCOLYSIS) (CELLS)

MEL'NIKOVA, M.K.; BLOK, I.B.

Case of acquired toxoplasmosis with distrubance of neuropsychic activity. Vrach. delo no.5:138-139 My '61. (MIRA 14:9)

1. Somaticheskoye otdeleniye Kiyevskoy psikhonevrologicheskoy bol'nitsy imeni akademika I.P.Pavlova (nauchnyy rukovoditel' - prof. I.A.Polishchuk).
(TOXOPLASMOSIS) (NERVOUS SYSTEM--DISEASES)

MIZRUKHIN, I.A., prof.; TURKEVICH, O.M., zasluzhennyy vrach UkrSSR,
DANILYUK, S.I.; MEL'NIKOVA, M.R.

Benzohexonium treatment in arteriosclerotic psychosis. Vrach. delo no.2:151-152 F '63. (MIRA 16:3)

1. Kiyevskaya psikhonevrologicheskaya bol'nitsa imeni akademika I.P. Pavlova.
(HEXONIUM--THERAPEUTIC USE) (ARTERIOSCLEROSIS)
(PSYCHOSES)

NEMCHINOV, Vasiliy Sergeyevich, akademik; MEL'NIKOVA, M.S., red.; STAROSTENKOVA, M.M., red.izd-va; ATROSHCHENKO, L.Ye., tekhn.red.

[Prospects for the development of the economy of Eastern Siberia] O perspektivakh razvitiia ekonomiki Vostochnoi Sibiri. Moskva, Izd-vo "Znanie," 1959. 28 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser. 9, no.2) (MIRA 12:4)

(Siberia, Eastern--Economic conditions)

GALAKHOV, P.N.; SHUMAKOVA, A.A.; GOLOVNEV A., spets. red.;
MEL'NIKOVA, M.S., red.

[New poisonous chemicals for protecting farm crops against pests and diseases] Novye ia.okhimikaty (dlia zashchity sel'skokhoziaistvennykh kul'tur ot vreditelei i boleznei. n.p.) Vystavka dostizhenii narodnogo khoziaistva SSR (n.d.) 22 p. (MIRA 17:5)

MEL'NIKOVA, M.V

PHASE I BOOK EXPLOITATION SOV/5215

Akademiya nauk SSSR. Mezhduvedomstvennyy komitet po provedeniyu Mezhdunarodnogo geofizicheskogo goda. III razdel programmy KMG: Zemnoy magnetizm i zemnyye toki.

Korotkoperiodicheskiye kolebaniya elektromagnitnogo polya zemli (Short-Period Oscillations of the Earth's Electromagnetic Field) Moscow, Izd-vo AN SSSR, 1961. 114 p. 1,800 copies printed (Series: Its: Sbornik statey, No. 3)

Resp. Eds.: A. G. Kalashnikov, Doctor of Physics and Mathematics, and V. A. Troitskaya, Candidate of Physics and Mathematics; Ed.: Ye. P. Shchukina; Tech. Ed.: Ye. V. Maksut.

PURPOSE: This publication is intended for geophysicists.

COVERAGE: This collection of articles, published by the Interdepartmental IGY Committee of the USSR Academy of Sciences, treats problems of geomagnetism and telluric currents. Individual articles deal with various (short-period, dynamic, steady, etc.) oscillations of the terrestrial electromagnetic field, particularly in the arctic region. No personalities are mentioned. Brief English abstracts accompany each article. References follow individual articles.

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66162

AUTHORS: Troitskaya, V. A., Mel'nikova, M. V. SOV/20-128-5-14/67

TITLE: On Characteristic Intervals of Pulsations Diminishing in Periods (10-1 sec) in the Electromagnetic Field of the Earth and Their Connection With Phenomena in the Upper Atmosphere

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 5, pp 917-920 (USSR)

ABSTRACT: Extremely fast recording (1/2 mm/sec) of variations of the electromagnetic field of the Earth during violent magnetic storms revealed the existence of intervals of short-period pulsations of periods diminishing from 10 to 1 sec. Data evaluated up to the present show that these intervals of short-period pulsations constitute that morphological kind of static of the terrestrial electromagnetic field which is directly correlated to the development of strong atmospherics in the upper stratosphere. By means of the extremely fast recording mentioned above it is possible to determine the point of time at which magnetic storms begin, and when the most intense atmospherics in the upper stratosphere take place. A scheme of the development of these intervals of short-period pulsations is given in a diagram. However, the relative duration of the various pulsations is not expressed

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On Characteristic Intervals of Pulsations Diminishing in Periods (10-1 sec) in the Electromagnetic Field of the Earth and Their Connection With Phenomena in the Upper Atmosphere SOV/20-128-5-14/67

in this scheme. The most characteristic element of these periodic pulsations are pulsations having a period of 2 to 4 seconds. Pulsations of precisely these periods can continue unattenuated for some dozens of minutes. An amplitude modulation passing over into a pulsation is characteristic of all pulsations occurring in this interval. According to the data available at present 1 to 4 intervals of short-period pulsations may be observed in the course of a magnetic storm. An interval of this kind usually lasts no longer than 1 h. All the big storms occurring during the International Geophysical Year contained intervals of the kind discussed in the present paper. The second diagram shows the propagation and development of the short-period pulsations of September 29, 1957 for various stations. This diagram shows, among others, the following: (1) There were 2 intervals of short-period pulsations during the magnetic storm of September 29, 1957. The first lasted about twice as long as the [illegible]. Both began with irregular pulsations and ended with pulsations of short periods. (2) The development of short-

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On Characteristic Intervals of Pulsations Diminishing in Periods (10-1 sec) in the Electromagnetic Field of the Earth and Their Connection With Phenomena in the Upper Atmosphere

period pulsations indicates simultaneousness of the beginning and end of the pulsations. This simultaneousness extends over a vast territory. (3) The periods of the pulsations within the interval of short-period pulsations vary in a similar manner (with slight changes) at all stations. (4) Apart from the excitation of the short-period pulsation described above with reference to the universal time, this phenomenon is influenced essentially also by conditions determined by the local time. Similar investigations were made of the other storms listed in the present paper together with the date of occurrence. In most cases the interval of short-period pulsations begins at 5 p.m. approximately Greenwhich time (for western stations). The beginning and development of these short-period statics correspond to the appearance and development of red polar aurorae. Diagrams illustrating the state of the ionosphere on July 8, and on September 4, 1958 are attached. There are 3 figures and 3 Soviet references.

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On Characteristic Intervals of Pulsations Diminishing in Periods (10-1 sec) in the Electromagnetic Field of the Earth and Their Connection With Phenomena in the Upper Atmosphere

SOV/20-128-5-14/67

ASSOCIATION: Institut fiziki Zemli im. O. Yu. Shmidta Akademii nauk SSSR (Institute of Physics of the Earth imeni O. Yu. Shmidt of the Academy of Sciences, USSR)

PRESENTED: July 6, 1959, by D. I. Shcherbakov, Academician

SUBMITTED: July 4, 1959

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SOV/138-58-8-3/11

AUTHORS: Ratner, S. B. and Mel'nikova, N. Ye.

TITLE: Wear (Testing) of Rubber by Abrasive Paper (Ob iznashivanii reziny po shkurke)

PERIODICAL: Kauchuk i Rezina, 1958, Nr 8, pp 14 - 21 (USSR)

ABSTRACT: The Soviet standard test GOST 426-1941, and also the International standard ISO 717 (Aug.1958) stipulate a wear test against abrasive paper on a Grissel machine. These tests give considerable scatter, and the wear index of the specimens alters sharply if their length is changed. A new Soviet standard, GOST 426-1958 gives better reproducability. Approximate formulae have been established which relate wear of the rubber to its physical and mechanical properties, and to its composition. Fig.1 shows typical curves for rate of wear versus time. (Units cm^3/minute versus abrasion time in minutes). The wear rate diminishes rapidly at first, and then continues at a stable rate for some time. The areas under each of the curves are equal and correspond to the volume worn away from the specimens, all of which started with 6 mm protrusion from the clamp. The stable wear rate commences after not more than half of the specimen has been worn

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Wear (Testing) of Rubber by Abrasive Paper

away. The wear index should be determined by this stable rate of wear, but the difficulty is to determine when it begins. The reasons for the initial instability of wear rate are examined. The abrasive paper itself must be conditioned, but as curves 2, 3 and 5 in Fig.1 show, initial instability is still exhibited with a repeat test with a specimen of the same type of rubber on previously conditioned paper. The authors review the shortcomings of existing methods of test, including the ISO Dupont method, GOST 426-1941, and the German standard test. Results with the first two methods are compared with results to the new GOST 426-1957 standard in Table 1. V is the specific wear index and α the coefficient of variation. The effect of the height of the specimen and the influence of bending are considered. Fig.2 shows the relationship between rate of wear (cm^3/min) versus flexibility as determined in formula (1). This indicates that the stable zone commences when the value β lies between 0.5 and 0.8 mm^{-3}. The principle cause of scatter in the early part of the test may be attributed to bending of the specimen. Fig.3 shows various stages in the wear of a specimen of 1 cm x 1 cm area. Fig.4 shows the wear rates with specimens of various

heights, and various shapes. The black symbols are for long specimens, and the white for short ones. While cylindrical or spherical shapes give stable wear rates, it is concluded that the most suitable change to make is to reduce the height of the standard 2 cm x 2 cm specimen from 6 mm to 3.5 mm. This will give a 5 to 10 minute test against Corundum 150 paper. The characteristics of the rubbers tested to obtain the plots in Fig.2 are given in Table 2. The formula (2) relates rate of wear to the properties of the rubber and the abrasive paper. ΔV is the loss of material in cm^3. According to GOST 426-1957, N the normal load should be 2.6 kg, and t, time of test, five minutes. K is a constant taking into account the abrasive paper and has a value, in this test, of 0.4 kg/cm^2. μ stands for coefficient of friction and σ for the strength of the rubber. η is the percentage extension of the specimen in a standard test to determine the elasticity of the rubber. This formula is justified by practical test, the results of which are shown in Fig.5. The deviation of the points representing actualrate of wear for a

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Wear (Testing) of Rubber by Abrasive Paper

very large variety of rubbers, from the line calculated according to formula 2, is not more than 20%. A specific wear index coefficient V is given in formula (3). Here V is expressed in $cm^3/kw\text{-hour}$. W is the work of friction. With Corundum 150 paper, the constant A becomes 700. σ is expressed in kg/cm^2, and η, as before, is a percentage representing elasticity. Since σ and η depend only on the composition of the rubber the relationship of values of V with different abrasive papers should remain constant. This is confirmed by the results shown in Table 4, where four different rubbers were tested against two papers of different abrasiveness. The relationship V_2/V_1 is constant. However, this relationship will not hold if the nature of the abrasive, rather than its grain size, is altered widely. While coarse and standard electrocorundum papers gave good agreement, a silicon paper gave a different result, as indicated in Table 5. Table

3 in this paper relates the optimum percentage of various fillers, with different types of rubbers, to give greatest strength, and to give least wear. These values frequently coincide. There are 4 Figures, 5 Tables and 15 References: 7 Soviet and 8 English.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (Research Institute of the Rubber Industry)

SOV/138-58-10-5/10

AUTHORS: Sakhnovskiy, N. L; Ivanova, S. A; Mel'nikova, K. V; Ratner, S. B; Reznikovskiy, M. M; and Smirnova, L. A.

TITLE: Wear Testing of Rubber (Ob otsenke istirayemosti reziny)

PERIODICAL: Kauchuk i Rezina, 1958, Nr 10, pp 19 - 22 (USSR)

ABSTRACT: The mechanism of abrasive wear of rubber is imperfectly understood. Laboratory tests with different types of equipment give inconsistent results, and results of laboratory tests do not agree with service or road tests. The relations between the three mechanical parameters, F, frictional force, N, normal load, and U, rubbing speed are discussed. Three modes of test are possible: (a) F, variable, N and U constant, (b) N, variable and (c) U, variable. These give respectively wear indices: V_{NU}, V_{FU}, and V_{NF} where V is expressed in cm^3 wear from the specimen. A specific wear index, v, is given: $v = V_{NU}/W$ (cm^3/kwh) where W is work done against friction. This specific wear index takes into account the coefficient of friction μ of the rubber. Since μ varies for different rubbers, correlation between the indices V_{NU}, V_{FU} and the specific index v,

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Wear Testing of Rubber

will vary for different rubbers. This is illustrated in Figs. 1, 2 and 3 where the relative wear according to different indices is plotted against filler content in the rubber sample. Actual values for different rubbers of the indices V_{NU}, v, and V_{FU} are given in Table 1. The specific wear index v is calculated only under the constant normal load regime. The final columns in the table give relative values for these indices for comparison with relative values obtained on actual service tests (given in the last column). The index V_{FU} shows best correlation with service or road tests, and it is suggested that this index would be more appropriate when testing rubber intended for tyres. This is brought out further in Fig.4 where the relative indices of laboratory tests are compared with relative wear in actual road tests. (Symbols 1, 2, 3 and 4 are for tests giving an index V_{FU}, symbols 5 and 6 give V_{NU} and symbol 7 is for index v.). While indices v and V_{FU} should have similar correlation, errors can arise when v is taken as an index through changes in temperature at the rubbing surface. The third mode of test with F and N constant and with U variable has received little attention, but is of interest since it represents the conditions of wear

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through skidding. Wear tests under laboratory conditions and road or service tests have different intensity, particularly as regards temperature. Table 2 compares contact pressure, rubbing speed and temperature for a tyre at 30 km/hr with 3% slip with conditions under the GOST 426-57 (Government Standard) test under constant load conditions on a Grassel test machine. The contact pressure in the laboratory test is very much lower while the temperature is much higher. The wear index V_{mo} is not proportional to the normal load N. However, the product $v\mu$ is proportional to N and is a suitable wear index as has been proved on tests with N varying from 0.5 to 12 kg/cm². It is suggested that it would be more realistic to conduct laboratory tests at high contact pressures, but to reduce the coefficient of friction by using less abrasive test surfaces. Methods using radioactive tracers could enable the intensity of laboratory tests to be

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brought down to a level which would simulate road tests more exactly and still retain sensitivity of test. There are 4 Figures, 3 Tables and 25 References: 13 English, 9 Soviet, 2 French and 2 German

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti i Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (Scientific-Research Institute of the Tire Industry and Scientific-Research Institute of the Rubber Industry)

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Mel'nikova, M. V., Ratner, S. B., and Klitenik, [illegible]

"On Frictional Wear (in the Air [illegible]) of Rubber" [illegible]

Sukhoye i granichnoye treniye. Friktsionnyye materialy (Dry and Boundary Friction. Friction Materials) Moscow, Izd-vo AN SSSR, 1960. [illegible] Errata slip inserted. [illegible] copies printed. (Series: Its: Trudy, v. 2)

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Resp. Ed.: I. V. Kragel'skiy, Doctor of Technical Sciences, Professor; Ed. of Publishing House: K. I. Grigorash; Tech. Ed.: S. G. Tikhomirova.

The collection published by the Institut mashinovedeniya, AN SSSR (Institute of Science of Machines, Academy of Sciences USSR) contains papers presented at the III Vsesoyuznaya konferentsiya po treniyu i iznosu v mashinakh (Third All-Union Conference on Friction and Wear in Machines, April [illegible], 1958.

S/081/61/000/024/084/086
B101/B110

AUTHORS: Ratner, S B , Kiltenik, G S , Melnikova, M V

TITLE: Frictional wear (abrasion) of rubber

PERIODICAL: Referativnyy zhurnal Khimiya, no 24, 1961, 589, abstract 24P432 (Tr 3-y Vses. konferentsii po treniyu i iznosu v mashinakh, v. 2 M , AN SSSR, 1960, 93 - 101)

TEXT: Abrasion (A) of rubber with sandpaper on the Grasseli machine shows a considerable spread of values which is due to the bending of the specimen This spread can be eliminated by reducing the specimen height to 3.0 - 3.5 mm If A is caused by a metal network, it is not influenced by the oiling of the friction contact This makes it possible to investigate swelled rubbers For A with sandpaper and with network $I = \text{const } P_p^c$ holds for the intensity I of wear P_p is the specific normal load, c a coefficient For sandpaper $c \approx 1$ which corresponds to the Shalamakh equation; for network $c \geqslant 1$ Hence the influence of rubber hardness differs with different load A satisfactory correlation exists between A with network and with steel disk The correlation between A

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Frictional wear (abrasion) of rubber

S/081/61/000/024/084/086
B101/B110

with sandpaper and A with the disk is poorer The absolute wear correlates with the friction coefficient of rubber [Abstracter's note: Complete translation]

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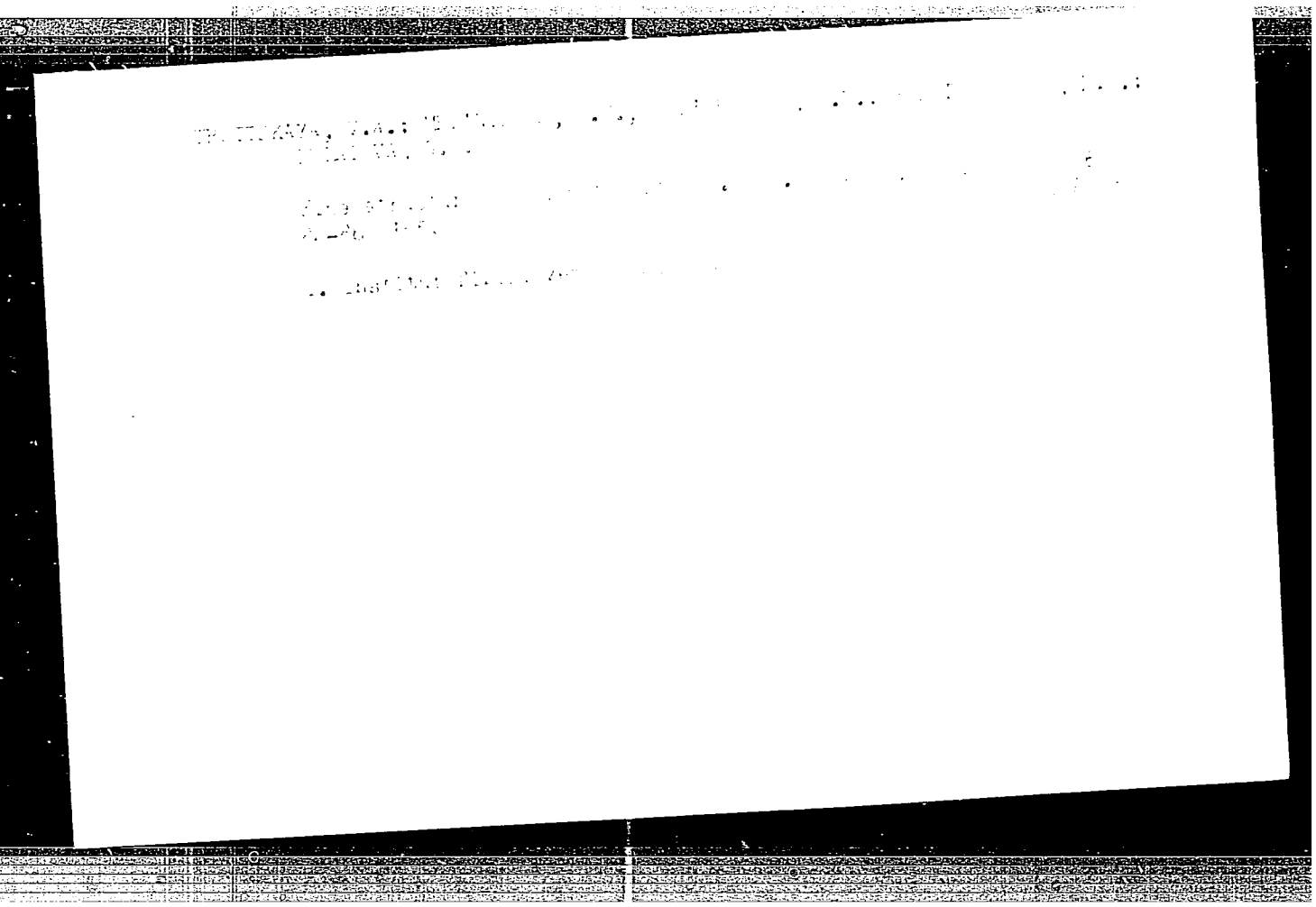

MEL'NIKOVA, N.A.; ONOPRIYENKO, V.P.

Geology and conditions of development of the Devonian oil pool of the Sultangulovskiy-Zaglyadine field. Trudy VNIGNI no.30:224-232 '61. (MIRA 14:9)
(Orenburg Province--Oil reservoir engineering)

MEL'NIKOVA, N.A.; PANTELEYEV, A.S.

Geology and some characteristics of the simultaneous development of two pools of the Krasnoyarsk oil field in Orenburg Province. (MIRA 15:7)
Trudy VNIGNI no.34:100-107 '61.
(Orenburg Province--Petroleum geology)

PANTELEYEV, A. S.; MEL'NIKOVA, N. A.; GILEVA, N. M.

Water-oil contact of carbonate reservoirs in the central part of the Bol'shoy Kinel' swell. Geol. nefti i gaza 7 no.1:28-32 Ja '63. (MIRA 16:1)

1. Orenburgskaya kompleksnaya laboratoriya Vsesoyuznogo nauchno-issledovatel'skogo geologorazvedochnogo neftyanogo instituta.

(Bol'shoy Kinel' Valley—Oil reservoir engineering)

MEL'NIKOVA, N.A.

MEL'NIKOVA,N.A.--"The Utilization of Chemical Constituents (Nitrogenous Substances, Fats, Carbohydrates, and Salts) of Basic Local Food Products." Cand Med Sci, Kazan' State Medical Inst, Kazan' 1953. (KEFERATIVNYY ZHURNAL--KHIMIYA, No 1, Jan 54.)

Source: [illegible] 16, 22 July 1954

MAKHTINGER, A.I., doktor meditsinskikh nauk; LEVINTOVA, S.Ye., kandidat meditsinskikh nauk; SINEVA, T.N.; MEL'NIKOVA, N.A.

Unconditioned secretion of the salivary glands in cases infectious hepatitis (Botkin's disease). Vop.okh.mat. i det. 1 no.4:44-48 Jl-Ag '56. (MLRA 9:9)

1. Iz otdela vysshey nervnoy deyatel'nosti (zav. - deystvitel'nyy chlen AMN SSSR prof. N.I.Krasnogorskiy) i kliniki starshego vozrasta (konsul'tant - prof. A.B.Volovik) Gosudarstvennogo nauchno-issledovatel'skogo pediatricheskogo instituta (dir. - prof. A.L. Libov) Leningrad.
(HEPATITIS, INFECTIOUS) (SALIVARY GLANDS)

VOLKOVA, Ye.M., MOSKVINA, T.N., MEL'NIKOVA, N.A., BEREGOVSKAYA, Z.G.

Problem of organizing an effective diet. Vop.pit. 17 no.5:81-83 S-O '58 (MIRA 11:10)

1. Iz kafedry gigiyeny pitaniya (zav. - dots. A.N. Yunusov) Kazanskogo meditsinskogo instituta.

(DIET, balanced diet arrangement (Rus))

YUNUSOVA, A.N.; MEL'NIKOVA, N.A.; BEREGOVSKAYA, Z.G.; ZAKIROVA, M.I.; SILINA, A.G.

Nutrition of children in preschool boarding establishments in Kazan and suggestions for its improvement. Kaz. med. zhur. no.4:84-88 Jl-Ag '61. (MIRA 15:2)

1. Kafedra gigiyeny pitaniya (zav. - dotsent A.N.Yunusova) Kazanskogo meditsinskogo instituta i gorodskoy sanepidstantsii (glavnyy vrach - A.N.Krepysheva).
(KAZAN--CHILDREN--NUTRITION)

MEL'NIKOVA, N.A. (Moskva); POLETAYEVA, Ye.S. (Moskva)

Method for the simultaneous calculation of closed-loop electrical networks with several nominal voltages. Izv. AN SSSR. Energ. i transp. no.2:112-116 Mr-Ap '65. (MIRA 18:6)

ANTROPOV, Petr Yakovlevich; MEL'NIKOVA, N.B., red.; SAVCHENKO, Ye.V., tekhn.red.

[Kursk Magnetic Anomaly; rich iron ore deposits of the Kursk Magnetic Anomaly and the outlook for their development] Kurskaia magnitnaia anomaliia; bogatye zheleznye rudy Kurskoi magnitnoi anomalii i perspektivy ikh promyshlennogo osvoeniia. Moskva, Izd-vo "Znanie," 1958. 23 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser. 8, vyp. 2, no.24) (MIRA 12:2)
(Kursk Magnetic Anomaly--Iron ores)

TAUBER, Georgiy Mikhaylovkch, doktor geograf.nauk; SEN'KO, Pavel Kononovich, kand.geograf.nauk; DOLGUSHIN, Leonid Dmitriyevich, kand.geograf.nauk; MEL'NIKOVA, N.B., red.; STRELKOVA, N.A., red.izd-va; ATROSHCHENKO, L.Ye., tekhn.red.

[Soviet scientists on the sixth continent] Sovetskie uchenye na shestom kontinente. Moskva, Izd-vo "Znanie," 1959. 31 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.9, Fizika i khimiia, no.21)
(MIRA 12:11)

(Antarctic regions)

MEL'NIKOVA, N. F.

"The Carotene Content in Feeds and the Vitamin A Content in Equine Organs and Tissues." Cand Vet Sci, Kirov Agricultural Inst, Min Higher Education USSR, Kirov, 1954. (KL, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

YUSHKEVICH, P.M., inzh.; Prinimala uchastiye: MEL'NIKOVA, N.G.

Compression from all sides and the phase hardening of residual austenite. Metalloved. i term. obr. met. no.7:11-14 Jl '61. (MIRA 14:6)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut.
(Steel—Hardening)
(Phase rule and equilibrium)

ROGATINA, Nina Prokof'yevna; POPOVA, Zinaida Fedorovna; ARTMANIS, Stella Andreyevna; MEL'NIKOVA, Nina Ivanovna; AVDEYEVA Yekaterina Semenovna; KUZNETSOVA, Irina Pavlovna; ZHEREBINA, Anna Semenovna; VOYEVODINA, Aleksandra Dmitriyevna; KOLPAKOVA, Ninel' Yevgrafovna; KHAYEVA, Aleksandra Afanas'yevna; DUNDUKOVA, Valentina Petrovna; LAUSTEN, A.G., nauch. red.; GABOVA, D.M., red.; VINOGRADOVA, G.A., tekhn. red.

[Women's and children's light dress] Zhenskoe i detskoe legkoe plat'e. Moskva, Gostekhizdat, 1962. 493 p. (MIRA 15:7)
(Dressmaking)

MEL'NIKOVA, N. I., Cand Agric Sci (diss) -- "The effect of trace elements on the yield and chemical composition of perennial grasses under the conditions of Leningrad Oblast". Leningrad-Pushkin, 1960. 15 pp (Min Agric RSFSR, Leningrad Agric Inst), 150 copies (KL, No 11, 1960, 127)

MEL'NIKOVA, N. I.: Master Biol Sci (diss) -- "Secondary pests of the spru[illegible] and measures to combat them in the forests around Moscow." Moscow, 195[illegible]. 12 pp (Moscow Order of Lenin and Order of Labor Red Banner State U im M. V. Lomonosov), 150 copies (KL, No 10, 1959, 124)

MEL'NIKOVA, N.I.

Observations on the bark beetle Dendroctonus micans Kug. in the Moscow region. Zool. zhur. 41 no.2:234-240 F '62. (MIRA 15:4)

1. Ukrainian Research Institute of Forest Management and Agro-Forest-Melioration, Kharkov.
(Moscow region--Bark beetles)

MEL'NIKOVA, N.I.

Purpose of air holes in the colonies of the birch bark beetle Scolytus ratzeburgi Jans. Vop. ekol. 7:113-114 '62. (MIRA 16:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lesovodstva i mekhanizatsii lesnogo khozyaystva, Pushkino, Moskovskaya oblast'.
(Bark beetles) (Insects--Behavior)

MEL'NIKOVA, N.I.

Biological significance of air holes in the passages of the bark beetle Scolytus ratzeburgi Jans. (Coleoptera, Ipidae). Ent. obozr. 43 no.1:32-45 '64 (MIRA 17:6)

1. Otdel zashchity lesa Ukrainskogo nauchno-issledovatel'skogo instituta lesnogo khozyaystva, g. Khar'kov.

MEL'NIKOVA, N. K.

3

Comparative evaluation of properties of zinc oxide obtained by different methods. B. L. Davydovskaya and N. K. Mel'nikova. *Byull. Obmen. Opytami v Lakokrasochnoi Prom.* 1953, No. 1, 12–17; *Referat. Zhur., Khim.* 1953, No. 9800.—The properties of zinc oxide (pigment) were studied with samples obtained by a thermal method (reduction of a raw material contg. Zn with subsequent oxidation of Zn vapors) and with samples obtained by a method of pptn. and calcination (from zinc hydroxide obtained by interaction of $ZnSO_4$ vapors and ammonia, from the basic carbonate obtained by the action of a soda soln., and from basic carbonate pptd. from an ammonia complex). According to the basic pigment properties (color, covering power, a. l intensity), each form of zinc oxide proved to differ very little from the others, excluding samples obtained by means of an ammonia-zinc complex. These samples differed in their low pigment properties, brilliant, oily color, photo, chem. pigment activity, lowest degree of dispersion, and in connection with the latter, the greatest atm. stability. Industrial samples of zinc oxide had insufficient atm. stability; however, it could be increased considerably by addnl. calcination of zinc oxide at 900°. After a study of zinc oxide structure with the aid of an electron microscope, it was shown that samples obtained by a thermal method consist of needle-like crystals, and samples obtained by pptn. and calcination consist of particles with a spherical shape.

Marjorie Ketner

CH

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MEL'NIKOVA, N.L.

[How to raise cabbage] Kak vyrastit' kapustu. Moskva, Ministerstvo prosveshchenila RSFSR, 1954. 13 p. (MLRA 9:11)
(Cabbage)

KULIKOV, F.A., inzh.; MEL'NIKOVA, N.M., inzh.; DMITROVICH, N.A., inzh.

Faulty instructions for gas-generator operators. Bezop. truda v prom. 4 no.7:36 Jl '60. (MIRA 13:8)
(Gas producers--Safety measures)

S/032/62/028/002/010/057
B101/B110

AUTHORS: Bayula, A. G., and Mel'nikova, N. M.

TITLE: Determination of tin in materials of high silicic acid content

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 2, 1962, 166

TEXT: To eliminate the effect of silicic acid, and to lower its adsorption properties, tin is reduced with the twofold excess of metallic aluminum (2 - 4 g of Al for a weighed portion of 1 g). In this case, separation of silicic acid is not necessary. To increase the accuracy of tin titration by iodine, oxygen is kept off by a simple vessel stopper. [Abstracter's note: Complete translation]

ASSOCIATION: Dal'nevostochnyy filial Sibirskogo otdeleniya Akademii nauk SSSR (Far Eastern Branch of the Siberian Department of the Academy of Sciences USSR)

Card 1/1

BAYULA, A.G.; MEL'NIKOVA, N.M.

Possibility of a complex dressing of collective concentrates using chlorinated roasting at low temperatures. Soob. DVFAN SSSR no.17: 33-37 '63. (MIRA 17:9)

1. Dal'nevostochnyy filial im. V.L. Komarova Sibirskogo otdeleniya AN SSSR.

AID P - 3756

Subject : USSR/Chemistry

Card 1/1 Pub. 152 - 20/22

Authors : Baskakov, Yu. A. and N. N. Mel'nikova

Title : Preparation of α-naphthylacetic acid by Willgerodt's reaction

Periodical : Zhur. prikl. khim. 28, 9, 1016-1019, 1955

Abstract : The preparation of α-naphthylmethyl ketone and α-naphthylacetamide and the hydrolysis of α-naphthylacetamide are described in detail. The yield of α-naphthylacetic acid was 98%. 22 references, 12 Russian (1941-1954).

Institution : None

Submitted : F 3, 1954

KRIGER, Yu.A.; TAM[illegible]YEV, A.Kh.; [illegible], [illegible].A.; [illegible], [illegible]; [illegible], [illegible].

Protective action of some [illegible] tetracycline [illegible]atives in radi-
ation injury of yeasts. [illegible] no.4:94-96 '65. ([illegible] 18:10)

1. Reko[illegible] universiteta im. M.V.[illegible].

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103[illegible]

AUTHOR: Veres chagin, N.K. and Mel'nikova, N.N. SOV-12-90-4-14/22

TITLE: Zoogeographic Archeological Discoveries in Eastern Kazakhistan and in the Altay Kray (Zoogeograficheskiye otkrytiya arkheologov v Vostochnom Kazakhstane i v Altayskom Kraye)

PERIODICAL: Izvestiya Vsesoyuznogo geograficheskogo obshchestva, 1958, Vol 90, Nr 4, pp 385-387 (USSR)

ABSTRACT: Archeological researches conducted by the Institut Material'noy Kultury AN SSSR (The Institute of the Material Culture of the AS, USSR) have given interesting results. S.I. Rudenko found bones of numerous animals killed by prehistoric cave dwellers in the paleolithic layers of a cave in Ust'-Kana. Among these bones was an ankle bone of a camel. It was the first time that a camel was found in the Eurasian paleolith. The ankle bone of the camel was much larger than that of present camels. In another cave in the Bukhtarma region, S.S. Chernikov found

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SOV-12-30-4-11, 22

Zoogeographic Archeological Discoveries in Eastern Kazakhstan and in the Altay Kray

bones of 10 species of animals, among them, bones of unguligrades animals. This find shows that in the Upper Pleistocene, ungul grades inhabited this region, though in our days they are found only in Central Mongolia and Tibet. There are 3 photos, 6 Soviet references.

1 Archeology---USSR

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MELNIKOVA, N. N.

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B004/B070

AUTHORS: Belyakov, V. A., Van Shu-fen', Glagolev, V. V., Dalkhazhav, N., Lebedev, R. M., Mel'nikova, N. N., Nikitin, V. A., Petrzhilka, V., Sviridov, V. A., Suk, M., Tolstov, K. D.

TITLE: Inelastic Interactions of 7 Bev π^--Mesons and Nucleons 19

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 4(10), pp. 937-947

TEXT: The inelastic interaction of 7-Bev π^--mesons with nucleons is studied in this paper. The preliminary results were communicated to Kiyevskaya konferentsiya po fizike vysokikh energiy (Kiyev Conference on the Physics of High Energies). The emulsion chamber consisted of 240 НИКФИ-Р (NIKFI-R) layers with a thickness of 400μ. 5300 interactions with the nuclei of photoemulsion were observed. Of these, 535 inelastic interactions were analyzed (Table 1). The theoretical distribution of the charged particles was calculated by V. S. Barashenkov. Spurious scattering was eliminated by special measurements (Table 2). 453 pions and 134 protons

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were identified. The angular distribution of pions and the total distribution of all stars (in c.m.s.) are shown in Fig. 1. For smaller number of charged particles, the asymmetry increases strongly. This is principally due to pions with large momenta (Fig. 2). Therefore, the angular distributions are very different for fast and slow pions (Fig. 3). Pions with momenta < 0.5 Bev show an almost isotropic distribution. From the angular and total distributions of protons (Fig. 4) it is seen that the protons conserve their initial direction. From the momentum distributions of pions and nucleons, the authors conclude that the average momentum of the nucleons and of the charged pions does not depend on the increase of the number of charged particles. The same result follows from the data for the average transverse momenta $\bar{p}_{\perp}$ of protons and pions given in Table 3. Fig. 7 shows the number of neutral mesons as a function of the number of charged particles. The results can be interpreted only partly by the statistical theory. The asymmetry of the angular distribution of the secondary pions can only be explained by a peripheric collision of the pion with a pion of the nucleon shell (Figs. 8 and 9). An estimate of the radius of the nucleon core gave the

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maximum value of $4 \cdot 10^{-14}$ cm. The authors summarize the results as follows: Average momentum of protons = (0.89±0.04) Bev/c, average transverse momentum = (0.37±0.04) Bev/c; asymmetry of angular distributions of all pions = 1.56±0.10; pions with p > 0.5 Bev/c are emitted in the forward direction, their average momentum equaling (0.87±0.06) Bev/c and agrees, therefore, with that of the protons. The authors thank D. I. Blokhintsev and V. I. Veksler for discussion and advice. There are 9 figures, 3 tables, and 23 references: 9 Soviet, 8 US, 1 British, 1 German, 4 Italian, 1 Japanese, and 1 Polish.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: May 11, 1960

Card 3/3

S/120/62/000/001/005/061
E032/E514

AUTHOR: Mel'nikova, N.N.

TITLE: Effect of the finite dimensions of the chamber in studies of nuclear processes

PERIODICAL: Pribory i tekhnika eksperimenta, no.1, 1962, 32-36

TEXT: When a bubble chamber is irradiated with a beam of particles a number of secondary particle tracks are produced. In many cases it is necessary to distinguish those secondary particles which interact once again with the working substance or undergo a disintegration. Tracks of this type can be characterized by a parameter ℓ, which is the length between the point of origin of the secondary track and the point where the disintegration or further interaction occurs. Owing to the finite dimensions of the chamber, a fraction of events of this type may not be recorded and in order to obtain the correct energy and angular distribution of the secondary particles produced in the chamber, certain geometrical corrections must be introduced. The author derives an analytical function which gives the probability of recording events of the above type in a finite

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chamber. The true number of these events can be obtained from a comparison of the theoretical function and the distribution of the recorded events. It is assumed in the derivation that the secondary particles can be produced at any point within the chamber with equal probability and that the angular distribution of the secondary particles relative to the primary beam can be approximated to by a function of the form

$$A \cos^2 \Theta + B \cos \Theta + C.$$

The analytical formula has been used for a 24 litre propane bubble chamber (55 x 38 x 10 cm^3) of the OIYaI. Results of the calculations based on the analytical formula were compared with Monte-Carlo calculations. Good agreement is reported.
Acknowledgments are expressed to V. I. Veksler who suggested the problem. There are 3 figures.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy
(Joint Institute for Nuclear Studies)

SUBMITTED: June 20, 1961
Card 2/2

VAN YU-CHAN [Wang Yung-ch'ang]; KIM KHI IN; KLADNITSKAYA, Ye.N.; KOPYLOV, G.I.; KUZNETSOV, A.A.; MEL'NIKOVA, N.N.; NGUYEN DIN TY; SOKOLOVA, Ye.S.

[Search of radiative decays of resonances involving Λ-hyperons] Poiski radiatsionnykh raspadov rezonansov s uchastiem Λ-giperonov. Dubna, Ob"edinennyi in-t iadernykh issledovanii, 1964. 7 p. (MIRA 17:4)

MEL'NIKOVA, N.N.

Eugeniusz Romer, founder of [illegible] cartography in Poland; [illegible] the [illegible]th anniversary of his death. Izv. [illegible] [illegible] [illegible] 14[illegible]-1[illegible]7 Mr-Ap '65. (MIRA 1[illegible]:[illegible])

L 31281-66 EWT(1)/T JK

ACC NR: AP6020240 (A,N) SOURCE CODE: UR/0325/65/000/004/0094/0096

AUTHOR: Kriger, Yu. A.; Tambiyev, A. Kh.; Zakirov, L. A.; Mel'nikova, N. N.; Plakunov, V. K.

ORG: Department of Biophysics, Moscow State University im. M. V. Lomonosov (Kafedra biofiziki Moskovskogo gosudarstvennogo universiteta)

TITLE: Protective action of some of the chlortetracycline derivatives in radiation affection of yeasts

SOURCE: Nauchnyye doklady vysshey shkoly. Biologicheskiye nauki, no. 4, 1965, 94-96

TOPIC TAGS: Saccharomyces, antibiotic, bactericide, radioprotective agent

ABSTRACT: The object of the experiments described in this article was to determine the relationship between the bactericidal and radioprotective properties of chlortetracycline derivatives. A 2-day old culture of diploid yeasts Saccharomyces vini strain Megri 139V in the form of a film was irradiated on a solid medium consisting of a 2% layer with beer wort untreated with hops. After the irradiation the yeasts were washed with distilled water from the surface of the agar, diluted, and planted in glass Petri dishes filled with agar. The chlortetracycline derivatives used in the experiments were isochlortetracycline, dedimethylaminoaureomycinic acid, aureonamide, aureon, anhydrochlortetracycline, and chlortetracycline methyl-iodide. The protective properties of the antibiotics were tested by treating

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the solid medium with the preparations in a concentration of 10^{-4} M in a five percent solution of ethyl alcohol 20 minutes prior to the irradiation of the yeasts. The antibiotics when used in the above concentration are not toxic, while the ethyl alcohol in the form of a 5% solution is not radioprotective. The data obtained in the experiments established that all of the mentioned chlortetracycline derivatives have a low degree of bactericidal activity; all, however, possess radioprotective properties, with the degree of these properties varying, depending on the antibiotic used. The experiments thus established that there is no relationship between the bactericidal and radioprotective properties of the antibiotics. [JPRS]

SUB CODE: 06 / SUBM DATE: 01Feb65 / ORIG REF: 013 / OTH REF: 003

MEL'NIKOVA, N.P.; PIKINO, N.M.

Separating cyclohexane from narrow gasoline fractions of Novo-Dmitryevka oil of Krasnodar Territory. Trudy KF VNII no.8:96-101 '62. (MIRA 17:

KUPRIYANOV, V.A.; DOROGOCHINSKIY, A.Z.; MEL'NIKOVA, N.P.

Studying the hydrogenation of fractions of industrial isodecyl benzene on a nickel catalyst. Trudy GrozNII no. 15:278-293 '63. (MIRA 17:5)

DOROGOCHINSKIY, A. Z., MEL'NIKOVA, N. P., SHAKHLADOVA, I. A.

"Deuter[illegible]-Hydrogen Ex[illegible] [illegible] Catalystes.

Problems Kinetics and [illegible]
AN SSSR, 1957, [illegible]

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00103

DOROGOCHINSKIY, A.Z.; MEL'NIKOVA, N.P.; SHAKHZADOVA, I.A.

Deuterium-hydrogen exchange of some hydrocarbons on alumino silicate catalysts in cracking. Probl. kin. i kat. 9:162-167 '57.(MIRA 11:3)
(Catalysts) (Hydrogen--Isotopes) (Cracking process)

89-4-5-15/26

AUTHORS: Votlokhin, E. Z., Dorogochinskiy, A. Z., Mel'nikova, N. P.

TITLE: A Radiometric Method of Control of Interfaces Between Different Varieties of Petroleum Products Pumped Through A Single Pipeline (Radiometricheskiy metod kontrolya posledovatel'nykh perekachek razlichnykh sortov nefteproduktov po odnomu magistral'nomu truboprovodu)

PERIODICAL: Atomnaya Energiya, 1958, Vol 4, Nr 5, pp 475 - 477 (USSR)

ABSTRACT: If the oil transport from the fields to the place of shipment is carried out by way of a single pipeline and if, for example, gasoline, crude oil and diesel oil are sent through in direct succession it is especially important to know the interfaces between the transported products. If the time of arrival of one product at the place of shipment is exactly known a very economic working can be achieved by due regulation of the branch lines to the various reservoirs.

In the GrozNII the following method has been elaborated: At the same time when at the starting point of the

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A Radiometric Method of Control of Interfaces Between Different Varieties of **Petroleum Products Pumped Through a Single Pipeline**

pipeline another oil product is sent through, a radio-active liquid is added to this oil. At the place of arrival, i.e. at the pumping stations, it is recorded when the maximum intensity is reached. This is then the sign for the due and economic switching over.
This method has been tried at a 386 km long pipeline and proved to be very successfull.
Triphenylstibine which contains radio-active Sb^{124}, served as indicator. There are 2 figures.

SUBMITTED: August 1, 1957

AVAILABLE: Library of Congress

1. Radioactive substances—Applications 2. Pipelines—Operation

Card 2/2

MEL'NIKOVA, N. P.

СИНТЕЗ И СВОЙСТВА НАФТЕНОВЫХ УГЛЕВОДОРОДОВ С ДЛИННОЙ БОКОВОЙ ЦЕПЬЮ

А. З. Дорогочинский, В. Н. Лаврентьев, А. В. Лютер
Н. П. Мельникова, В. А. Куприянов

VIII Mendeleyev Congress for General and Applied Chemistry on Section of Chemistry and Chemical Technology of Fuels, publ. by Acad. Sci. USSR, Moscow 1959

abstracts of reports scheduled to be presented at above mentioned congress, Moscow, 15 March 1959.

MEL'NIKOVA N. P.

СОЧЕТАНИЕ ХРОМАТОГРАФИЧЕСКОЙ АДСОРБЦИИ
С ИЗБИРАТЕЛЬНЫМ ГИДРИРОВАНИЕМ ПРИ АНАЛИЗЕ
ДИСТИЛЛЯТОВ ВТОРИЧНОГО ПРОИСХОЖДЕНИЯ

[redacted]

VIII Mendeleyev Congress for General and Applied Chemistry
Section of Chemistry and Chemical Technology of Fuels,
publ. by Acad. Sci. USSR, Moscow 1959

abstracts of reports scheduled to be presented at above mentioned congress,
Moscow, 13 March 1959.

MEL'NIKOVA, N.P.

11 (2, 4) PHASE I BOOK EXPLOITATION SOV/2213

Grozny. Metyanoy nauchno-issledovatel'skiy institut

Khimiya i tekhnologiya pererabotki nefti i gaza (Chemistry and Technology of Petroleum and Gas Refining Processes) Moscow, Gostoptekhizdat, 1959. 278 p. (Series: Its: Trudy, vyp. 4) 2,500 copies printed.

Executive Ed.: T.D. Yefremova; Tech. Ed.: A.S. Polosina; Editorial Board: A.Z. Porogochinskiy (Chairman), B.K. Amerik, O.I. Kaz'min, M.M. Kamakin, V.I. Lavrent'yev, Ye.S. Levchenko, and M.G. Mitrofanov (Deputy Chairman).

PURPOSE: This book is intended for petroleum engineers and technicians in scientific research institutes, planning organizations, and refineries.

COVERAGE: This collection of technical papers on oil and gas refining were originally discussed at the petroleum refining section of the Third GrozNII Scientific-Technical Congress in 1957. The articles have been published to help further the development of the petroleum refining industry and petrochemical industry in the Chechen-Ingush ASSR. The history and significance of the petroleum refining industry in the Grozny region is outlined by A.Z. Porogochinskiy with emphasis on the interdependence of the refineries and the aircraft, automobile and rocket manufacturing industries. Changes in modern engines demand a change in fuel and lubricating oil properties. The increased use of jet aircraft makes the production of high octane aviation gasoline less important than the production of the new type of fuel, aviation kerosene, the yield of which requires a quite different refinery run. Since crudes recovered at the Karabulak-Achaluki fields represent a valuable raw material for manufacturing lubricating oil and paraffin wax, their properties have been thoroughly investigated and results of analyses reviewed. The re-equipment of the fuel producing line of refineries at Grozny has been carried out on the basis of findings obtained from tests and pilot plant operations and a number of reforming and platforming units have been built to upgrade the low octane gasoline produced at Grozny. Tests were also conducted to ascertain the advisability of applying the destructive distillation of residues, which yields solar fractions badly needed for catalytic cracking unit as feed stock. Catalytic cracking units of the 43-102 type were first put on stream in the Grozny refineries in 1952, and since that time continuous efforts have been made to boost their processing capacity and improve the regeneration of catalysts. The authors make a number of suggestions as to how the throughput of the above units might be increased. The production of different types of polished and lead catalysts, the contamination of catalysts and their reactivation are discussed. The operation of a contact coking reactor, its design, and products yielded by contact coking units are described. The authors also deal with the manufacture of lubricating oils, paraffin and ceresine wax and indicate way of improving their properties. Electrical dehydration and desalting of crude oil and of light products are discussed. The authors state that in recent years extensive studies were made on the chemical conversion of petroleum products, and particularly of gases. As a result, a number of gas fractionators and compressors were built and installed to produce phenol and acetone from propylene and benzene, to synthesize ethyl alcohol and oxidize paraffinic hydrocarbons. An article is devoted to problem of automating various processes and developing the related control and gage instruments. The book contains numerous tables with the characteristics of different petroleum products obtained from refinery processing units, pilot plants and petrochemical refinery sections. Each article is accompanied by references.

TABLE OF CONTENTS:

1

contains numerous ... characteristics of different petroleum products obtained from refinery processing units, pilot plants and petrochemical refinery sections. Each article is accompanied by references.

TABLE OF CONTENTS:

MEL'NIKOVA N. P.

COUNTRY : USSR
CATEGORY :

ABS. JOUR. : [illegible] 76112

AUTHOR : [illegible] Dorozhinskii, A. Z., and *
INST. : [illegible]
TITLE : [illegible] Successive [illegible]
Different Types of Petroleum Products Through a
Pipeline
ORIG. PUB. : [illegible] No. [illegible] (1959)

ABSTRACT : See [illegible]

[illegible]

*Mel'nikova, N. P.

DROZDOVA, Ye.I.; ORKINA, Z.G.; SVETOZAROVA, O.I.; ZHDANOVA, V.V.; MEL'NIKOVA, N.P.; OVSYANNIKOV, P.V.

Refining of the intermediate distillate fractions of thermal cracking. Trudy GrozNII no.4:142-156 '59. (MIRA 12:9)
(Petroleum--Refining)

VOTLOKHIN, B.Z.; DOROGOCHINSKIY, A.Z.; MEL'NIKOVA, N.P.

Use of radioactive indicators for checking consecutive pumping over of petroleum products in main pipelines. Trudy GrozNII no.4: 253-265 '59. (MIRA 12:9)
(Petroleum---Pipelines) (Radioactive tracers)

MEL'NIKOVA, N.P.; IGONIN, P.G.; SHAKHZADOVA, I.A.

Study of the adsorption capacity of various cokes using radioactive indicators. Khim. i tekh.topl. i masel 4 no.1:28-31 Ja '59. (MIRA 12:1)

(Coke) (Adsorption) (Radioactive tracers)

MEL'NIKOVA, N.P.; SHAKHZADOVA, I.A.

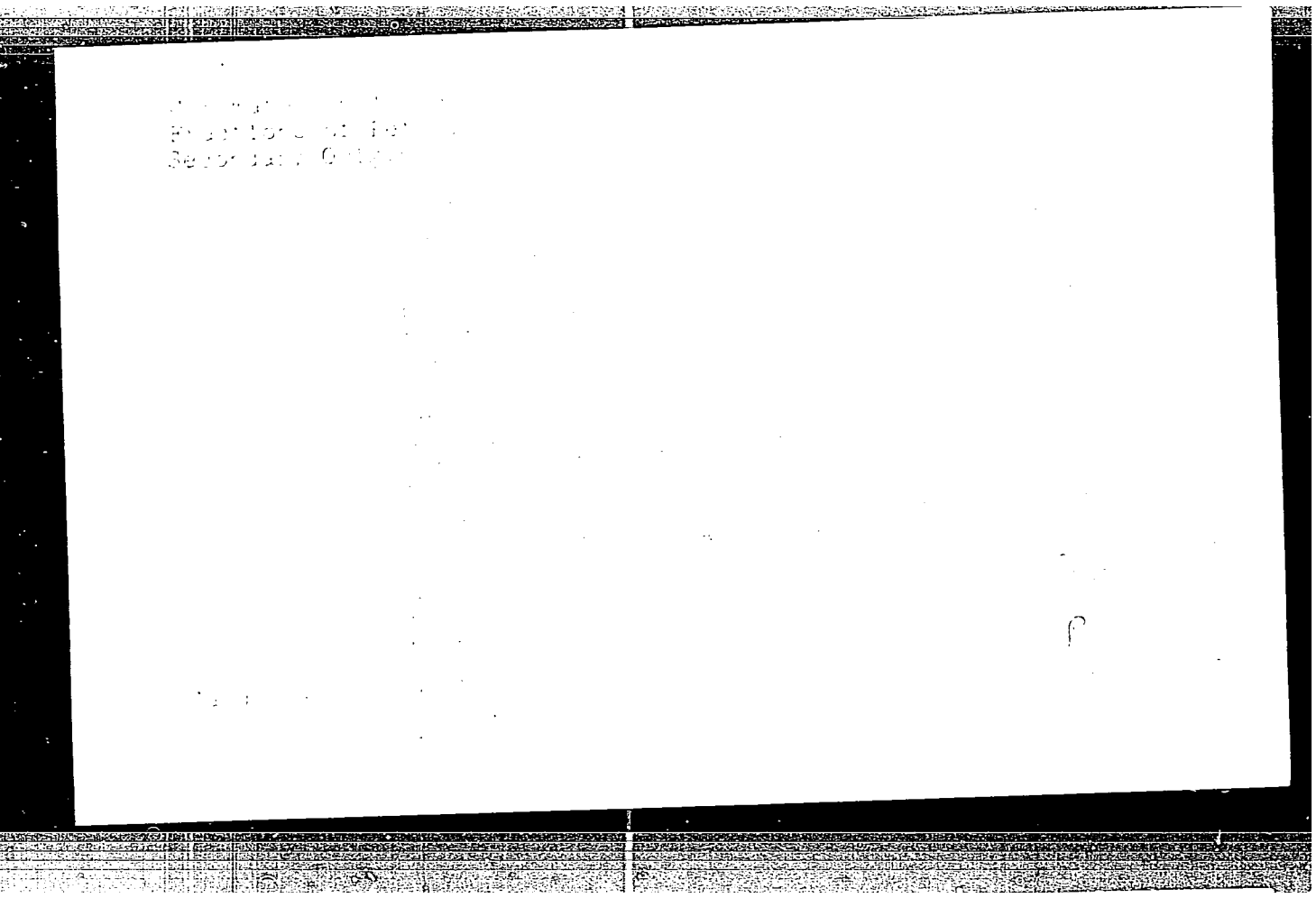
Synthesis of aromatic hydrocarbons labeled with C^{14}. Khim. i tekh.topl. i masel 4 no.1:40-42 Ja '59. (MIRA 12:1)

1. Groznenskiy nauchno-issledovatel'skiy neftyanoy institut.
(Hydrocarbons) (Carbon--Isotopes)

AUTHOR:

TITLE:

PERIODICAL



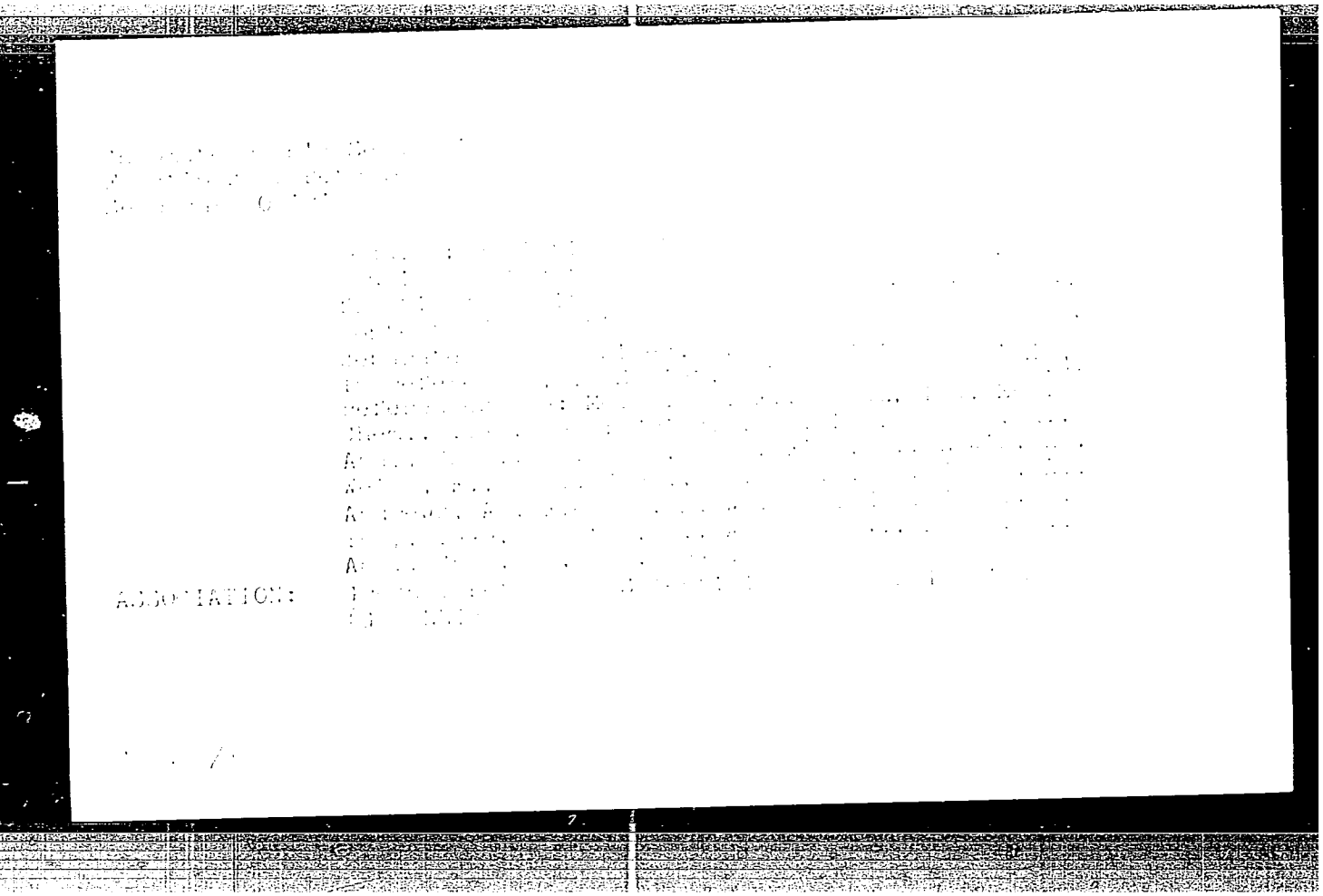


Table 4. Properties of the fractions, separated by the chromatographic method from the treated distillate, before and after selective hydrogenation.

FRACTION							
1st (PARAFFIN - NAPHTHENE)	114	0.7505	1.4240				
2nd (AROMATIC, OLEFIN)							
3rd (POLAR)							

5.3300

68998

AUTHORS: Dorogochinskiy, A. Z., Lavrent'yev, V. I., Lyuter, A. V., Mel'nikova, N. P., Kupriyanov, V. A.

S/020/60/131/02/045/071
B011/B011

TITLE: Synthesis and Properties of Naphthenic Hydrocarbons With a Long Side Chain

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 2, pp 367 - 370 (USSR)

ABSTRACT: The authors wanted to work out a general method and conditions for the synthesis of technical fractions of the substances mentioned in the title, as well as the study of the properties of these fractions. Propylene, butylene, amylene, hexylene, and heptylene were used for the purpose. As a result of the experiments conducted at the authors' institute, a 3-stage scheme of synthesis was suggested: 1) synthesis of olefins with a given number of C-atoms, or polymerization, respectively. A dehydrated pentane-amylene fraction from thermal cracking, purified from the sulphur compounds, was utilized. The catalyst was phosphoric acid on kieselgur. Olefins with ramified structure were obtained in this connection. The highest yield of isodecenes occurred at 170-180°, pressure of 50-60 atm, volume rate 3-4 h^{-1}. Amylenes

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were transformed to 70%. A concentrate boiling between 120 and 185° was obtained from the polymerizate (yield 85-90%). Table 1 shows the resulting (mostly ramified) structures of isodecenes. Table 2 shows their physico-chemical properties (the raw material was fraction 6 of the thermal cracking and benzene). Isomerization and hydro-dehydro polymerization of the olefins were ascertained as side reactions. 2nd stage: alkylation. Aromatic hydrocarbons (benzene, toluene) were alkylated by means of the isodecenes produced (Refs 3-5). The best conditions were: 97% H_2SO_4, reaction time 2 hours, ratio benzene:isodecene = 5:1. Temperature 10-20°. The alkylate amounted to 140% by weight of olefins or 90% of the theoretical yield. A fraction boiling between 180° and 350° was obtained from the alkylate as a concentrate of isodecyl benzenes (85% of the alkylate). It chiefly consisted of mono-substituted derivatives of benzene (Table 2). On using aluminum chloride as catalyst the yield was higher and attained 97-98%. Disproportionation occurred as side reaction. 3rd stage: hydrogenation. The alkylate concentrate was hydrogenated on 2 catalysts: a) nickel catalyst. The optimum conditions were: pressure 7 atm, molar ratio hydrogen:alkylate = 2.8:1; 150-200°.

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Synthesis and Properties of Naphthenic Hydrocarbons With a Long Side Chain

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Volume rate 0.2 h^{-1}; b) nickel-tungsten catalyst. Optimum conditions: pressure in the reaction zone 200 atm; molar ratio hydrogen-alkylate = 64:1; 300°; volume rate 0.5 h^{-1}. To prevent a temperature increase on the latter catalyst, the alkylate was diluted with gasoline distillate (fraction 80-120°) of the trade-mark "Kalosha" in a ratio of 1:2. Destruction was recorded as a side reaction. The desired naphthene fraction was obtained from the hydrogenation product by rectification. It boils out between 180° and 350°. Its yield attained 90% of the aromatic hydrocarbons contained in the alkylate (Table 2). The range of the fluctuation of properties in dependence on procedure and raw materials is shown in table 3. Data obtained show that the scheme described here leads to naphthene hydrocarbons with a long side chain, high density, high caloricity, and a low freezing temperature. The following names are mentioned: Ye. G. Vol'pova, L. A. Potolovskiy, I. F. Blagovidov, L. I. Kostikin, Yu. A. Gol'dshtein, Yu. I. Kozorezov, A. Z. Dorogochinskiy, and K. I. Zimina. There are 3 tables and 6 Soviet references.

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68999

Synthesis and Properties of Naphthenic Hydrocarbons With a Long Side Chain

S/020/60/131/02/045/071
B011/B011

ASSOCIATION: Groznenskiy neftyanoy nauchno-issledovatel'skiy institut (Groznyy Scientific Research Institute of Petroleum)

PRESENTED: November 28, 1959, by B. A. Kazanskiy, Academician

SUBMITTED: November 25, 1959

Card 4/4

DOROGOCHINSKIY, A.Z.; MEL'NIKOVA, N.P.

Deuterium exchange of some hydrocarbons of the aromatic and naphthene series on an aluminosilicate cracking catalyst. Zhur.VKHO 6 no.1:118-119 '61. (MIRA 14:3)

1. Groznenskiy nauchno-issledovatel'skiy neftyanoy institut.
(Hydrocarbons) (Deuterium)

34888
S/[illegible] S/[illegible]/[illegible]
[illegible]/[illegible]01

11.0132

AUTHORS: Doromochkin[illegible], [illegible], [illegible]nikov, [illegible], [illegible], [illegible], Churovsk[illegible], V. A.

TITLE: Effect of the [illegible] of [illegible] hydro[illegible]tion of unsaturated hydrocarbons in thermocracking distillate on its thermostability

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, [illegible], abstract 3M152 (Tr. Grozn[illegible]. neft. n.-i. in-t, no. [illegible], 1961, 53 - [illegible])

TEXT: The effect of the group composition of hydrocarbons on the thermal stability of the distillate from thermocracking, boiling out at [illegible] - [illegible] (obtained from the [illegible] of [illegible]) and of the fuel [illegible] after selective hydro[illegible] to different [illegible] of unsaturated hydrocarbons (original content in the distillate: [illegible]) was investigated. It was shown that the decrease of the fuel thermal stability [illegible] the presence of diolefins and aromatic hydrocarbons with unsaturated hydrocarbon chains. Mild hydrogenation (up to 10%) of the unsaturated [illegible] from the distillate resulted in a fuel with satisfactory thermal stability.

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B109/B101

Effect of the degree ...

Abstractor's note: Complete translation.

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S/081/62/000/002 [illegible]
B157/B110

5 3300

AUTHORS: Dorogochinskiy, A. Z., Mel'nikova, N. P., Shakhzadova, T. A., Gontar', L. Ya.

TITLE: A study of the reaction of isotope exchange of certain aromatic and naphthenic hydrocarbons on a deuterated aluminosilicate cracking catalyst

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1962, 489, abstract 2M229 (Tr. Groznensk. neft. n.-i. in-t, no. 11, 1961, 226-252)

TEXT: The deuterium exchange of aromatic and naphthenic hydrocarbons of varying structure on an industrial aluminosilicate cracking catalyst has been investigated in a flow through type plant in the vapor phase at 150° - 200°C and atmospheric pressure; volume flow rate 0.10 - 0.15 hr⁻¹. For comparison, the hydrogen exchange was studied between certain aromatic hydrocarbons and tritium oxide in the presence of the same catalyst specimen. It was shown that the capacity of alkyl derivatives of benzene to undergo hydrogen exchange on a deuterated catalyst increases with the length of the side chain of the hydrocarbon; the presence in the side

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S/081/62/000/002/065/[illegible]
B157/B110

A study of the reaction of

chain of a tertiary C atom (isopropyl benzene) increases the depth of deuterium hydrogen exchange. Naphthenic hydrocarbons will undergo isotopic exchange readily only when a tertiary C atom is present in the molecule (methyl cyclohexane, ethyl cyclohexane, isopropyl cyclohexane [Abstracter's note: Complete translation.]

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ACCESSION NR: AR3000550 S/0081/63/000/007/0510/0510

SOURCE: RZh. Khimiya, Abs. 7P185

AUTHOR: Maslyanskiy, G. N.; Bursian, N. R.; Mel'nikova, N. P.; Fedorov, A. P.; Podol'skiy, M. A.

TITLE: Production of aromatic hydrocarbons by catalytic reforming of gasoline fractions

CITED SOURCE: Novosti neft. i gaz. tekhn. Neftepererabotka i neftekhimiya, no. 7, 1962, 10-13

TOPIC TAGS: Krasnodar and Kuybyshev gasolines; catalytic reforming; aromatic hydrocarbons

TRANSLATION: In a pilot-plant unit experiments were conducted on catalytic reforming, over the industrial Pt-catalyst AP-56, of the 60-105° and 105-140° narrow fractions of straight-run gasolines of

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ACCESSION NR: AR3000550

the Krasnodar and Novokuybyshevsk refineries. The fractions of Krasnodar gasoline contained 1.5-1.7 times more naphthenic hydrocarbons and 1.5-2 times less S-compounds, than the analogous fractions of Kuybyshev gasoline. On catalytic reforming of the 60-105° fraction of Kuybyshev gasoline the yield of light aromatic hydrocarbons was 8.5%, as compared with 15% obtained as a result of processing of the analogous fraction of Krasnodar gasoline. The yield of high-boiling aromatic hydrocarbons from the above-stated fractions was found to be closely approximating, and amounted to about 20%. On catalytic reforming of the 105-160° fraction of either gasoline the yield of aromatic hydrocarbons C sub 8 amounted to 23-26%. -- A. N.

DATE ACQ: 21May63 ENCL: 00 SUB CODE: 00

Card 2/2

MASLYANSKIY, G.N.; BURSIAN, I.R.; MEL'NIKOVA, N.P.; PODOL'SKIY, M.A.; FEDOROV, A.P.; Prinimali uchastiye: NOVOZHILOVA, T.S.; DAVYDOVA, Z.A.; VOLKHINA, N.K.

Long service life of a platinum catalyst. Khim.i tekh.topl.i masel 7 no.2:5-7 F '62. (MIRA 15:1)

1. Krasnodarskiy filial Vsesoyuznogo nefte-gazovogo nauchno-issledovatel'skogo instituta i Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov.
(Platinum) (Cracking process)