

SMIRNOVA, A. I.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Analytical Chemistry

(2)
Determination of fructose by a colorimetric method.
G. Beshpalov and A. I. Smirnova. *Med. Prom. S.S.S.R.*
1949, No. 6, 26-8. A method for detg. fructose in the
presence of glucose, mannose, or galactose is described.
Fructose, in contrast to other monosaccharides, gives a
greenish color with Na nitroprusside under certain condi-
tions. To 3 cu. mm. of sample of pH 3.4 add 1 ml. of
freshly prepd. 1 % Na nitroprusside soln. and 10 drops of N
alkali hydroxide. After 15 min. add 5 drops of concd.
AcOH. After an addnl. 20 min. the characteristic green-
ish color develops fully. Two series of fructose-glucose
solns. were prepd. One series was acidified with AcOH and
the other with HCl, with 1 drop of concd. HCl equal in
H ion concn. to 77 drops of AcOH. The colors were meas-
ured 15 min. after the acidification. The resulting concn-
absorption curves were almost parallel lines (in the range
2-10% fructose) with the HCl series giving higher absorp-
tions of light. The intensity of the color varies so much that
a simple comparator can be used. Burilla Mayerle

BOGOMOLOV, A.I.; SMIRNOVA, A.I.

Catalytic properties of natural clays containing hygroscopic
moisture. Trudy VNIIGRI no.174:54-60 '61. (MIRA 14:12)
(Clay)
(Catalysis)

KIRYANOVA, Z.V.; DMITRIYEV, M.V., doktor ekonom. nauk, prof., red.;
SASS-TISOVSKIY, B.A., doktor tekhn. nauk, prof., red.;
SMIRNOVA, A.I., ved. red.; YAZLOVSKAYA, E., tekhn. red.

[Production factors and means of lowering the cost of caustic
soda] Faktory formirovaniia i puti snizheniia sebestoimosti
kausticheskoi sody. Moskva, Vses. in-t nauchn. i tekhn.
informatsii, 1959. 98 p. (MIRA 15:6)
(Sodium hydroxide)

SMIRNOVA, A.I.

Materials on hydrochemical characteristics of the Black Sea in the
Karadag area. Trudy Karad. biol. sta. no.16:3-15 '60. (MIRA 13:9)

(BLACK SEA—WATER—COMPOSITION)

TREGUBOVA, A.S.[Trehubova, A.S.]; KHARCHENKO, Ye.T.; KISILENKO,
O.A.[Kysylenko, O.A.]; SEMENOVA, A.I.[Smyrnova, A.I.];
MIKHAYLOVA, O.D.[Mykhailova, O.D.]; KARASENKO, A.P.;
MOROZ, V.F.; GUK, Yu.I.[Guk, Yu.I.]; AYZENBERG, M.M.
MARKOV, V.I., red.

[Agroclimatic manual on Zhitomir Province] Agroklimatychnyi
dovidnyk po Zhytomyrs'kii oblasti. Kyiv, Derzhsil'hospvy-
dav URSS, 1959. 89 p. (MIRA 17:6)

1. Ukraine. Spravlinyya hidrometeorologichnoy sluzhby.

Smirnova, A.I.

49-58-3-5/19

AUTHORS: Driving, A.Ya. and Smirnova, A.I.

TITLE: Clouds in the Stratosphere (Oblaka v stratosfere)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, 1958, Nr 3, pp 337--346 (USSR)

ABSTRACT: According to Khrgian (Ref.1), nacreous clouds at altitudes between 20 and 30 km are observed exclusively during the winter and predominantly in Scandinavia, Finland, Britain and Alaska. Therefore the authors considered it of interest to investigate a case in which nacreous clouds were observed in the stratosphere at a different time of the year and a different latitude. At an altitude of 22.4 km the authors photographed a cloud which was illuminated by the beam of a projector (Fig.1) at 4.00 hrs of September 13, 1953 in the Caucasus (41° 44' latitude at an altitude of 1800 m above sea level during a windfree, dry but cool night when the sky was perfectly clear. During the same day at 18.00 hours the cloud was photographed again. The projector had a mirror of 150 cm diameter and a rating of 11.5 kW. The projected beam was directed at 75° to the horizon and the exposures were taken at points spaced 9.6 m apart, using 3 identical cameras, fitted with 1:1.1 objective lenses as well as with Woollaston prisms and filters. The data of the prisms and

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Clouds in the Stratosphere.

of the filter are given. The results obtained by photographing by means of polarised light are compared with aerological data and weather chart data. Polarisation data permit expressing certain assumptions on the nature and dimension of the particles composing the cloud which was photographed. The case of a laminated tropopause is considered, the formation of which was followed by means of probing with a projector. The results of probing of the stratosphere by the projector beam are in good qualitative agreement with visual observations made in England (Refs.6 and 8), and also with observations of a complex tropopause under anticyclone conditions (Refs.9 and 10). The data obtained by the authors of this paper on the stratosphere cloud (altitude, vertical thickness, transparency, average particle dimensions, refraction index of the particles) lead to the assumption that the cloud photographed by the authors in the Caucasus and the nacreous cloud are of exactly the same nature in spite of the fact that the latter has not been observed in the Caucasus region. There are 12

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Clouds in the Stratosphere.

figures and 10 references, 6 English, 2 Russian and 2 German.

ASSOCIATION: Institute of Physics of the Atmosphere, Academy of Sciences, USSR (Akademiya nauk SSSR, Institut fiziki atmosfery)

SUBMITTED: January 31, 1957.

AVAILABLE: Library of Congress.

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49-58-5-5/15

AUTHORS: Driving, A. Ya., V.N. Zolotavina, Polozova, M.N. and
Smirnova, A.I.

TITLE: Determination of the Atmospheric Stratification and Products
of Condensation by Searchlight Method (Stratifikatsiya
atmosfery i obrazovaniye produktov kondensatsii po dannym
prozhektornogo zondirovaniya)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya,
1958, Nr 5, pp 613-624 (USSR)

ABSTRACT: The thin layers of semi-transparent clouds are often seen
to be formed at about 18 000 m high. The observations estab-
lished the fact that these clouds are produced when the tropo-
pause is being steadily lifted with a simultaneous cooling
at the cloud layer. It was observed in Great Britain that
this phenomenon is accompanied by a lowering of the upper
layers over the anticyclones. The dynamic pressure appears
to be the main factor in the production of water condensation.
Its intensity can be affected by speed of rising air and an
inflow of moisture from the surrounding areas. As the water
condensation in the atmosphere greatly affects light scatter
properties of the air it is evident that the problem of

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Determination of the Atmospheric Stratification and Products of
Condensation by Searchlight Method.

optical methods of observation becomes important. Of the methods of application, the searchlight proved to be one of the most precise. This work gives an account of an optical sounding through the atmosphere carried out for four consecutive nights in Moscow region in conjunction with the aerological data and synoptic charts. The resulting observations are presented in the form of graphs showing various aspects of light scatter, temperature distribution and polarisation. Fig.1 gives the intensity of light scatter of the beam as measured at various heights through a blue filter. Fig.2 represents the thermoisoplets for the period of experimenting. Fig.3 shows a degree of polarisation of the light scatter for various heights. It is interesting to see how the height of the light spot was rising during the first three nights. It rose from 2-3 km to the region of the tropopause by the second night and showed a height of 22-25 km during the third night. The measurements at 22-25 km were carried out also with a photographic camera. It should be noted that while the scatter intensity was changing at higher levels, it remained constant at about 8 km. The observed data agrees with the theoretical calculations of

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Determination of the Atmospheric Stratification and Products of
Condensation by Searchlight Method.

the angle of scatter, as it is shown on Fig.4, where the theoretical curve is being plotted together with the observed ones. The graph of temperature isopleths indicates a definite lowering of temperature at the observed heights. The surface synoptic charts are shown on Fig.5. It should also be noted that the degree of polarisation in the lower atmosphere lies always in the range of light scatter $135-153^\circ$, as shown on Fig.6; this was prepared from the data obtained on many occasions for different localities. The degree of accuracy of the measurements is somewhat lower for heights above 15 km due to the star light interfering with the searchlight. The tests with a green filter showed that it makes measuring more difficult owing to the absorption of some of the light intensity. Fig.7 shows an example of the results obtained through it. Entirely different results were obtained on another occasion of sonding the atmosphere. Fig.8 shows the results of searchlight measurements made every 3.5 hours for two consecutive nights. The degree of polarisation is shown on Fig.9. The curves are rather smooth, giving

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Determination of the Atmospheric Stratification and Products of
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evidence of no layers of an increased scatter. This proved that the upper atmosphere up to 15 km was homogeneous. Fig.10 represents the temperature distribution for that period. The synoptic charts are shown on Fig.12. The following can be derived from the experiments: 1. Where the synoptic situation represents a high with the pressure 1050 mb at its centre and a sufficiently developed low to the North, while the upper atmosphere is of a uniform condition, the searchlight method will show a slight decrease of light scatter intensity owing to very small dimensions of free particles in the air (aerosol 0.1 μ). 2. In the case of a vertical decrease of temperature the light scatter exposes the particles of an increased size due to water condensation. 3. The products of condensation in such a case at heights of 14-23 km are in the shape of water droplets of 1.5 μ diameter. This method also makes possible an exact determination of the relationship of condensation products in the stratosphere to the vertical movement of the air at certain synoptic situations, thus contributing to observations of the least known sphere

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Determination of the Atmospheric Stratification and Products of
Condensation by Searchlight Method.

of the upper air. There are 13 figures and 12 references,
2 of which are Soviet, 2 German and 8 English.

ASSOCIATION: Akademiya nauk SSSR, Institut Fiziki atmcsfery
(Academy of Sciences, USSR, Institute of Physics of the
Atmosphere).

SUBMITTED: January 31, 1957.

1. Clouds--Analysis
2. Searchlights--Applications

Card 5/5

SIMONOV, Ya.P.; SALEPOVA, A.I.; SMIRNOVA, A.I.; SYRISOVA, Ye.M.; MIKHAYLOVA, A.D.; LEFIMOVA, K.A.; MOROZ, V.F.; GUK, Yu.I.; NIKOLAYEVA, Z.A.; AYZENBERG, M.M.; MIKHAYLOVA, K.L.; ROGOVSKAYA, Ye.G., red.; VOLKOV, N.V., tekhn.red.

[Agroclimatic reference book on Nikolayev Province] Agroklimatecheskii spravochnik po Nikolaevskoi oblasti. Leningrad, Gidrometeor.izd-vo, 1959. 103 p. (MIRA 13:2)

1. Kiyev. Gidrometeorologicheskaya observatoriya. 2. Nachal'nik otdela agrometeorologii Kiyevskoy gidrometeorologicheskoy observatorii (for Salepova). (Nikolayev Province--Crops and climate)

LITVINENKO, A.A.; SALEPOVA, A.I.; SMIRNOVA, A.I.; SYRTSOVA, Ye.M.;
MIKHAYLOVA, A.D.; GUK, Yu.I.; NIKOLAYEVA, Z.A.;
RYZENBERG, M.M.; MIKHAYLOVA, K.L.; USHAKOVA, T.V., red.

[Agroclimatological manual for Stalino Province] Agrokli-
maticheskii spravochnik po Stalinskoi oblasti. Leningrad,
Gidrometeoizdat, 1959. 101 p. (MIRA 17:8)

1. Ukraine. Upravleniye gidrometeorologicheskoy sluzhby.
2. Nachal'nik Otdela agrometeorologii Kiyevskoy gidro-
meteorologicheskoy observatorii (for Salepova).

SIMONOV, Ya.P.; SALEPOVA, A.I.; SMIRNOVA, A.I.; SYRTOVA, Ye.M.;
ABOVICH, P.B.; AYZENBERG, M.M.; MIKHAYLOVA, K.L.; USHAKOVA,
T.V., red.; SERGEYEV, A.N., tekhn. red.

[Handbook on agricultural climatology in Zaporozh'ye Province]
Agroklimaticheskii spravochnik po Zaporozhskoi oblasti. Le-
ningrad, Gidrometeoizdat, 1959. 111 p. (MIRA 17:4)

1. Ukraine. Upravleniye gidrometeorologicheskoy sluzhby.

SMIRNOVA, A.I.

Waste removal device for a mobile-carriage circular saw. Sbor.vnedr.
rats.pred. v les. i meb.prom. no.2:56-57 '59. (MIRA 13:8)

1. Mebel'naya fabrika tresta "Lengorles."
(Circular saws)

SMIRNOVA, A.I.

Utilization of glued plywood wastes. Sbor.vnedr.rats.pred. v les.
i meb.prom. no.2:121-122 '59. (MIRA 13:8)

1. Mebel'naya fabrika tresta "Lengorles."
(Plywood industry)

SMIRNOVA, A.I.

Improved hand cart for hauling cabinet-type furniture inside the shop.
Sbor.vnedr.rats.pred. v.les..i meb.prom. no.2:130-131 '59. (MIRA 13:8)

1. Mebel'naya fabrika tresta "Lengorles."
(Furniture industry--Equipment and supplies)
(Hand trucks)

SMIRNOVA, A. I.

USSR/Medicine - Actinomycosis
Medicine - Penicillin

Sep 48

"Mild Cases of Actinomycosis Treated With a Combination of Penicillin and Iodine," A. I. Smirnova, First Surg Clinic, MONIKI, 1 p

"Sov Med" No 9

Subject affliction is one of most difficult to treat effectively. Reports results of penicillin-iodine therapy which appears to be more effective than methods now in use.

24/49T61

2/11/55
KONYAKHINA, M.A.: ANDREYeva, V.I.: BYSTRYAKOVA, L.V., KUSHINOVA, G.A.:
SHIRNOVA, A.I.

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Clinical characteristics of dysentery in young children. *Pediatriia*
no.2:Mr-Ap '55. (MLRA 8:8)

1. Iz kafedry infetskonnykh bolezneyu detey (zav.-prof. M.G. Dani-
levich) Leningradskogo pediatricheskogo meditsinskogo instituta
(dir.-prof. N.^m. Shutova) i Detskoy infektsionnoy bol'nitsy Lenin-
skogo rayona (glavyy vrach A.M. Belyayeva)
(DYSENTERY, BACILLARY, in infant and child)

SHUMKIN, B.N., SMIRNOVA, A.I., DANILOV, A.I.

Session of the Academy of Medicine of the U.S.S.R. held in Astrakhan
on the problem of intestinal of infections. Vest.AMN SSSR 13 no.9:
65-74 '58 (MIRA 11:10)

(INTESTINES---DISEASES)

SHUMKIN, B.N., dots., SMIRNOVA, A.I., DANILOV, A.I.

Astrakhan session of the Academy of Medicine of the U.S.S.R.
on the problem of intestinal infections. Vest.AMN SSSR 13
no.10:74-80 '58 (MIRA 11:10)
(INTESTINES---DISEASES)

CA

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Preparation of butadiene from pseudobutylene (2-butene). B. P. Fedorov, A. I. Smirnova and P. A. Semenov. *J. Applied Chem. (U. S. S. R.)* 7, 1166-80 (1934).—The dehydrogenation of 2-butene was carried out at 700° in the absence and in the presence of MgO, ZnO, Cr₂O₃, silica gel, Pt, Fe, Cu and C catalysts. The yield of the butadiene is increased with increase in temp. and it is lowered with the increase in the feeding velocity of pseudobutylene. The most favorable temp. in the presence of all catalysts, except Cr₂O₃, is 700°. Best results were obtained in the absence of catalysts for 2-butene dild. with N, amounting to 21% of butadiene with 18-24% decompn. of 2-butene. In the presence of MgO, with dild. with N, the butadiene yield was 25-29%, 27-29% of 2-butene being decompd. without forming butadiene.

A. A. Bochtlingk

ANALYTICAL METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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SMIRNOVA, A.I.

✓ 3077. Investigation of change of structure and properties of sodium-butadiene rubber under the influence of molecular oxygen at vulcanisation temperature. B. A. DOODKIN, A. I. SMIRNOVA, and N. A. KLADEN. "Starenie Kauchukov i Rezin" . . ., 1980, p. 18-27, 130. (Paper presented to VNITO Rezinshchikov Conference, 1980). The structuring influence of oxygen during vulcanisation is studied by the infra-red spectrum absorption method. There are 5 references, and the discussion is reported.

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SKIRNOVA, A. I.

"Investigation of Changes of Structure and Properties of Sodium-Butadiene Rubber During Oxidation With Molecular Oxygen at the Vulcanization Temperature." Sub 26 Mar 51, Moscow Inst of Fine Chemical Technology imeni M. V. Lomonosov.

Cand. Chem. Sci.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

SMIRNOVA, A. I.

✓ Conversion of high-melting carbin over clays. A. I.
Bogomolov and A. I. Smirnova. *J. Appl. Chem. U.S.S.R.*
27, 635-7(1954) (Engl. translation).—See *C.A.* 48, 12390A
B. M. R.

Smirnova

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PM ①

SMIRNOVA, A.I.

U S S R .

✓2354. TRANSFORMATION OF HIGH-MELTING CERESINES OVER CLAYS. Bogomolov, A.I. and Smirnova, A.I. (Zh. prikl. Khim. (J. appl. Chem., U.S.S.R.), 1954, vol. 27, 623-627; abstract in Chem. Abstr., 1954, vol. 48, 12396). Ceresine (melting 90°, d₄₀₀ 0.7864, n_D²⁰ 1.4360) is unaltered by heating to 300. In the presence of activated clay it breaks down to give lower-boiling iso-paraffins and a residual ceresine that is enriched with normal hydrocarbons. Such enrichment is aided also by the loss of side chains. The liquid products are mainly saturated and consist of nearly equal amounts of paraffins and aromatic hydrocarbons, with but traces of naphthenes. The cracking process with clay gives results similar to those obtained with aluminium chloride. C.A.

SMIRNOVA, A.K.; VOLOSANKIN, G.D.; RUBTSOVA, N.A.

PAS therapy of pulmonary tuberculosis in a dispensary. Probl.
tub. no.4:70-71 J1-Ag '54. (MLRA 7:11)

1. Iz Krasnodarskogo krayevogo tuberkuleznogo dispansera
(glavnyy vrach V.M.Khatskelevich)

(TUBERCULOSIS, PULMONARY, therapy,

PAS)

(PARAAMINOSALICYLIC ACID, therapeutic use,
tuberc., pulm.)

BORODKIN, V.F.; Primalni uchastiye: YERIKHOV, V.I., student; SOROKINA,
M.I. SMIRNOVA, A.L., studentka

Phthalocyanine analogs. Zhur.ob.khim. 30 no.5:1547-1553
M'y '60. (MIRA 13:5)

1. Ivanovskiy khimiko-tekhnologicheskii institut.
(Phthalocyanine)

S/080/60/033/011/003/014
A003/A001

AUTHORS: Smirnova, A. M., Kudryavtsev, N. T.

TITLE: An Investigation of the Effect of Ultrasonic Oscillations²¹ on the Process of Electric Deposition of Chromium ✓

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol. 33, No. 11, pp. 2521-2526

TEXT: The effect of ultrasound in the process of chrome-plating on the current efficiency, the quality of chromium deposits and the value of cathode polarization was studied. Vibrators of the K-50-φ-2 (K-50-F-2) with oscillation frequencies of 17.5, 20.5, 27.5 and 80 kc/s were used. The intensity of the oscillations was controlled by varying the electric power from the generator within the range of 200 to 3,000 w. The cathodes were cylindrical samples of 16 mm in diameter and 30 mm long or flat samples with rounded edges of 50 x 20 x 2mm. The cathode material was Cm 10 (st.10) and Cm 20 (st.20) steel. The anodes were plates of lead with 6% antimony. The porosity of the samples was determined by the ferroxyl method on samples with a chromium layer of 20-40μ. On several samples the microhardness was tested with a ПМТ-3 (PMT-3) device with a load of 50 g. The solutions under investigation contained 100-450 g/l CrO₃ and 0.32 to 10 g/l ✓

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S/080/62/035/002/011/022
D202/D302

AUTHORS: Kudryavtsev, N. T. and Smirnova, A. M.

TITLE: The effect of ultra-sound on the process of zinc electrodeposition

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 2, 1962, 328-334

TEXT: The authors studied the effect of ultra-sound on the rate of zinc deposition, quality of deposits and the polarization during plating in cyanide, acid and zincate electrolytes. A plating bath, fitted with nickel vibrators of 17.5 and 20 kc/s/sec was used; the ultrasonic field intensity being varied by power input on the vibrator from 100 to 1400 V-amp. The authors give full details of the electrolyte compositions, the experimental conditions and results. It was found that in cyanide plating the use of ultra-sound increased the current yield and allowed an increase in the admissible c.d. by 3 - 5 times, the resulting zinc plate being brighter and more compact than without its use; maximum plating velocity being obtained at low NaCN concentration; even a slight increase

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D202/D302

The effect of ultra-sound ...

in the normality of NaCN leading to a marked drop in the current yield. The ultra-sound has practically no effect on microhardness of the deposit. In acid electrolytes the use of ultra-sound gave brighter deposits at c.d. much higher than without its use. In the absence of ultra-sound, at c.d. higher than 4 - 5 A/dm² the zinc plate was spotted and uneven, with current yields of ~85%. With the aid of ultra-sound a compact and bright zinc plate was obtained at c.d. 50 - 55 A/dm², with 95 - 99% yields. Similar results have been obtained in zincate electrolytes: With ultra-sound the zinc plate was compact and bright. The results depend, however, on the power input to the vibrator: It has to be higher than 400 V-amp at c.d. 30 A/dm². The cathode and anode polarization decreased in all electrolytes under the effect of the ultrasonic field, especially in zincate solutions and less markedly in the cyanide and acid ones. At the end of the article the authors propose chemical compositions of electrolytes and plating conditions for all three plating processes with the use of ultra-sound. There are 7 figures, 4 tables and 16 references: 12 Soviet-bloc and 4 non-Soviet-bloc. The references to the English-language publications read as follows: S.R.

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The effect of ultra-sound ...

S/080/62/035/002/011/022
D202/D302

Rich, Technical Proceedings at the 42nd Annual Convention, 131,
1955; D. J. Fishlock, Met. Ind. 93, 109, 1958.

SUBMITTED: January 10, 1961



Card 3/3

AUTHORS: Tager, A. A., Smirnova, A.^{M.},
Sysuyeva, N. ~~_____~~ ^K SOV/156-98-1-55/46

TITLE: The Density of Packing of Polymers and the Volume Change
Connected With Their Dissolution (Plotnost' upakovki polimerov
i izmeneniye ob'yema pri ikh rastvorenii)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Khimiya i khimicheskaya
tekhnologiya, 1958, Hr 1, pp. 135 - 138 (USSR)

ABSTRACT: The results obtained from the investigations of different
properties of polymeric substances prove that - according to
the chemical structure and the physical state - the polymers
may have both a dense and a loose packing. It may be expected
that the difference in the density of packing will act on the
change of its volume connected with dissolution. In a general
case the change of volume connected with the mixing of two
components may be attributed to 3 causes: 1) to the difference
of the energies of interaction in an isolated state and in
the mixture, 2) to the difference between the molecular size
of the components and 3) to the difference in the densities of
packing of the molecules. In order to eliminate the first
factor, it is advisable to investigate the change of volume

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The Density of Packing of Polymers and the Volume
Change Connected With Their Dissolution

S07/156-58-1-33/46

taking place with the mixing of components which have a similar chemical structure. If the liquids are related also with respect to the factors 2) and 3), no change of volume must take place at mixing. The authors selected 2 polymers which are different both with respect to their chemical structure and to their physical state: poly-isobutylene and polystyrene. In order to eliminate the influence exercised by the chemical structure of the solvent, such solvents were selected which are closely related to the polymer: ethyl-benzene for polystyrene and n-heptane for poly-isobutylene. The results obtained are shown in figure 1. It hence results that in the polystyrene-ethyl-benzene system a greater compression is observed than in the poly-isobutylene-isooctane system. It results from figure 2 that a considerable compression takes place in the polystyrene-benzene- and polystyrene-toluene systems. An analogous picture is found in the polystyrene-cyclo-hexanon system. In connection with this, the compression in the poly-isobutylene-benzene and poly-isobutylene-toluene systems is as small as in the poly-isobutylene-n-heptane systems (Fig 3). These data show clearly that in connection

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The Density of Packing of Polymers and the Volume
Change Connected With Their Dissolution

SOV/156-58-1-33/46

with the dissolution of a loosely packed polymer a greater compression takes place than with the dissolution of a densely packed polymer. Figure 4 shows data for a series of co-polymers of butadiene and styrene. Benzene was used as solvent. In connection with the dissolution of a co-polymer with 90% styrene-members a strong compression takes place which indicates a loose packing of this polymer. The compression decreases as the increasing number of the butadiene-members in the macromolecule. This signifies that the density of co-polymers increases as the decrease of the phenyl substituents. There are 4 figures and 3 references, 2 of which are Soviet.

ASSOCIATION: Kafedra fizicheskoy khimii Ural'skogo gosudarstvennogo universiteta im. A.M. Gor'kogo (Chair of Physical Chemistry at the Ural State University imeni A.M. Gor'kiy)

SUBMITTED: October 16, 1957

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2109, 2209, 1436

S/O20/60/135/003/037/039
B004/B060

AUTHORS: Smirnova, A. M., Pevzner, L. V., Raykova, T. V., and
Likhtman, V. I.

TITLE: Study of the Effect of Additions of Dispersed Iron as an
Active Filler on the Physicomechanical Properties of
Polymer Materials

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 3,
pp. 663 - 666

TEXT: For their investigation, the authors proceed from studies made by
P. A. Rebinder et al. (Refs. 1-3), according to which the introduction
of active fillers into polymers results in a strengthening of the spatial
network. These results are checked here by means of additions of iron
powder to polyamide resin-68, polyethylene and phenol-formaldehyde
resin (resol resin). The iron powder (specific surface 1.2 m²/g) was
prepared in A. T. Vagramyan's laboratory. The specimens obtained after
introduction of Fe into the polymer solution were tested for strength

Card 1/3

86051

Study of the Effect of Additions of Dispersed Iron as an Active Filler on the Physico-mechanical Properties of Polymer Materials S/020/60/135/003/037/039
B004/B060

and thermal stability. Fig.1 shows the effect of the Fe content on the polymer strength. Different behaviors were observed, depending on the nature of the polymers. The thermomechanical investigation showed for resinol resin an increase of the vitrification temperature and a decrease of deformability with an increase of iron content. Pure resinol resin: 40% deformation at 150°C; resinol resin with 80% Fe: 6% deformation at 300°C. In polyethylene, deformation as a function of temperature is hardly influenced by iron (at a content of up to 80% Fe). A sudden change appears at 90% Fe. The 8% deformation occurring at 150°C remains constant up to 400°C. It is believed that highly filled polyethylene represents oriented films linked to the filler by adsorption-chemical bonds. There are 4 figures and 8 Soviet references.

PRESENTED: June 18, 1960, by P. A. Rebinder, Academician

SUBMITTED: June 1, 1960

Card 2/3

43803

S/069/62/024/006/008/009
B101/B180

11.2.21
AUTHORS:

Smirnova, A. M., Raykova, T. V., Brodova, E. I., Kovarskaya,
L. B.

TITLE:

Effect of filler dispersity and grinding time on the
physicomechanical properties of polymers

PERIODICAL: Kolloidnyy zhurnal, v. 24, no. 6, 1962, 742-746

TEXT: Thermomechanical curves were plotted for Novolac phenol formaldehyde resin K-18 (K-18), polystyrene, and polyethylene mixed with various quantities of iron powder with dispersity between 1 and 17 m²/g. Results: Even small additions (30%) of coarse iron powder accelerate the setting of Novolac. With large additions (70%) the material loses its plasticity, becoming elastically solid and thermally stable as a result of structuralization. The effect of the filler increases with dispersity. In polyethylene the flow point is only raised by large additions (80%). Structuralized polyethylene remains highly elastic above the melting point of pure polyethylene. With 90% addition the material loses its plasticity and the structure is more ordered. Increased dispersity has
Card 1/2

Effect of filler dispersity and ...

S/069/62/024/006/008/009
B101/B180

the same effect as increased concentration. Small additions (30%) to polystyrene lower both brittle and flow points. With large additions (80%) the brittle point remains unchanged and the flow point is raised due to extension of the range of high elasticity. The usual 6 min grinding does not affect the thermomechanical properties of polyethylene, but 30 min will raise the flow point and 150 min lower it. The structure of polystyrene, however, is destroyed by prolonged grinding. The structure of polyethylene with a filler content of 90% was examined under an electron microscope. Spherulites formed more easily in filled than in unfilled polyethylene. These results show how important is the role of mechanochemical processes in the formation of new structures. There are 8 figures.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR, Moskva (Institute of Physical Chemistry of the AS USSR, Moscow)

SUBMITTED: October 20, 1961

Card 2/2

BOCHKAREV, V.V., red.; SMIRNOVA, A.M., red.; SMIRNOV, M.A., red.;
POPOVA, SM., tekhn. red.

[Measuring technique for radioactive preparations] Tekhnika
izmerenii radioaktivnykh preparatov. Moskva, Gosatomizdat,
1962. 191 p. (MIRA 16:1)
(Radioactive substances--Measurement)

BOCHKAREV, V.V., red.; SMIRNOVA, A.M., red.; SMIRNOV, M.A., red.;
POPOVA, S.M., tekhn. red.

[Techniques of measuring radioactive preparations] Tekhnika
izmerenii radioaktivnykh preparatov; sbornik statei. Moskva,
Gosatomizdat, 1962. 214 p. (MIRA 16:2)
(Radioactive substances--Measurement)

MARKUS, G.A.; ~~Prinimali uchastiye~~: ZHIVOGLAZOVA, L.Ye.; NIKITINA, V.A.;
AKIMOVA, N.V.; GOL'DINA, F.M.; SMIRNOVA, A.M.

New reagents based on products from the coal chemicals industry.
Koks i Khim. no.2:52-54 '63. (MIRA 16:2)

1. Fenc'l'nyy zavod (for Markus).
institut (for all except Markus).
(Coke industry ~~By-products~~)
2. Ukrainskiy uglekhimicheskiy'.
(Chemical tests and reagents)

SMIRNOVA, A. M.

"Qualitative Characteristics of the Wool of Semi-Fine-Wool Hybrids of Prekos and Kazakh Fat-Rumped Sheep." (Dissertation for Degree of Candidate of Agricultural Sciences) All-Union Sci Res Inst of Cattle Breeding, Moscow, 1955

SO: M-1036 28 Mar 56

AKHMETOV, H.M.; ANOSHKIN, V.V.; DROZDOVSKIY, N.M.; SMIRNOVA, A.M.

Modeling short-delay blasting. Trudy Akad. Nauk Kazakh. SSR 15:
38-42 '63. (MIRA 17:3)

AKHMETOV, M.M.; ANOSHKIN, V.V.; DROZDOVSKIY, N.I.; VALEGZHANIN, V.V.;
FILIPPOV, N.I.; KHYAZEV, V.L.; SMIRNOVA, A.M.

Short-delay blasting in mines of the Leninogorsk Complex Ore
Combine. Trudy Akad. Nauk Kazakh. SSR 15:43-47 '63. (MIRA 17:3)

SLOBODIN, Ya.M.; MAYOROVA, V.Ye.; SMIRNOVA, A.M.

Thermal degradation of ethylene-propylene rubber. Part 1:
C₂ - C₆ hydrocarbons in the products of thermal degradation
of ethylene-propylene synthetic rubber. Vysokom. soed. 6
no.3:541-544 Mr'64. (MIRA 17:5)

1. Severo-zapadnyy zaachnyy politekhnicheskiy institut.

L 41765-65 EPF(c)/EPR/EWP(j)/EWT(m)/T Pc-4/Pr-4/Ps-4 RM/WW

ACCESSION NR: AP4030374

S/0190/64/006/003/0544/0544

AUTHORS: Slobodin, Ya. M.; Mayorova, V. Ye.; Smirnova, A. M.

TITLE: Thermal decomposition of synthetic ethylene-propylene rubber. 1. C₂ - C₆ hydrocarbons among its thermal decomposition products

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 6, no. 3, 1964, 541-544

TOPIC TAGS: rubber, ethylene propylene, thermal decomposition, fractionation, hydrocarbon

ABSTRACT: Synthetic ethylene-propylene rubber, obtained by copolymerization of equimolar quantities of ethylene and propylene on Ziegler's catalyst, was subjected to thermal decomposition in a Würtz flask to determine the structure of the polymer. The distillation of gaseous products yielded 93.66% of liquid condensate, 5.20% of gas, and 1.14% of residue in the flask. The gas mixture was analyzed by the gas-liquid chromatographic technique, while the liquid part was subjected to fractional distillation. It was found that the gas mixture consisted of ethane and ethylene, propane, propylene, isobutylene, butane and butylene, and butadiene. In the liquid portion, 20 separate fractions were obtained within the 32-100C temperature range.

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L 41765-65

ACCESSION NR: AP4030374

Other fractions were separated in 50°-temperature intervals, up to 250C. Analysis by gas-liquid chromatography showed the C₅ fraction to consist of n-pentane, pentene-1, 2-methylbutane, 2-methylbutene-1, 2-methylbutene-2, isoprene, and piperilene. The C₆ fraction contained n-hexane, hexene-1, and 2-methylpentane. The authors calculated that in the C₅ fraction the sum of isomers with branched chain was 4.7 times higher than the sum of the ones with a normal chain structure. In the C₆ fraction there was a predominance of hydrocarbons with normal carbon chain. The mechanism of thermal decomposition of ethylene-propylene rubber is linked by the authors to an initial formation of free radicals, which originates at the impact of the residual Ziegler catalyst upon the copolymer. It was concluded that 1) the propylene units in the copolymer are separated by one, two, or three ethylene units; and 2) propylene units directly linked by the tail-to-tail principle may be present in very small amounts. Orig. art. has: 4 tables and 1 formula.

ASSOCIATION: Severo-zapadnyy zaachnyy politekhnicheskij institut (Northwestern Correspondence Polytechnical Institute)

SUBMITTED: 01Apr63

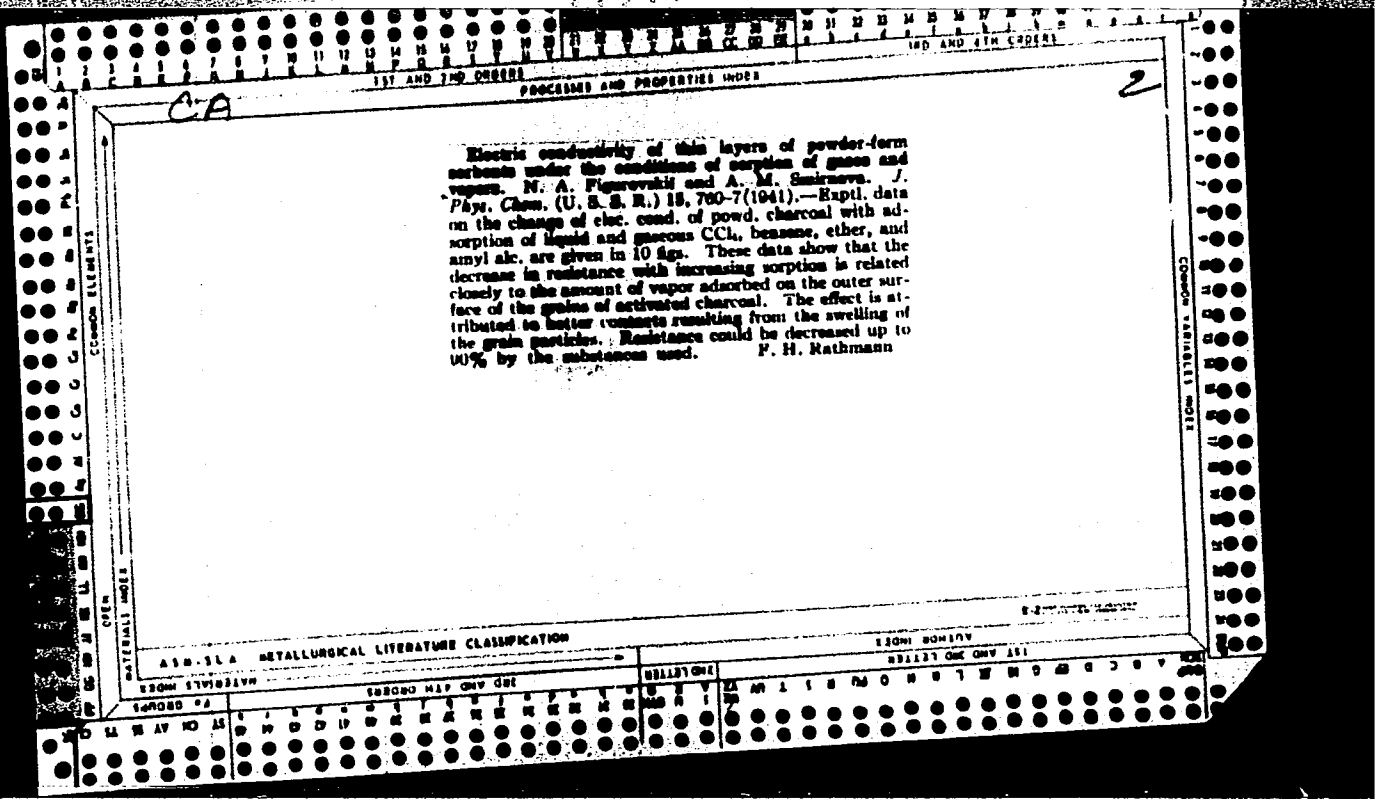
ENCL: 00

SUB CODE: GC

NO REF SOV: 005

OTHER: 008

Card 2/2 CC



SMIRNOVA, A. N.; TOKKOSHUROV, B. P.; SERB-JEREINA, N. N.

Osnovy khimicheskogo deemul'girovaniya neftey / Principles of the Chemical
De-emulsification of Crude Oils /, Moscow-Leningrad, 1946.

No. 444, 16 Aug 55

1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX 3RD AND 4TH ORDERS

2

ua

A new method of investigation of the stability of two-sided liquid films. A. M. Smirnova and P. A. Rehbinder. *Compt. rend. acad. sci.-U.R.S.S.* 52, 317-19(1946); cf. *C.A.* 32, 6125'.—An app. for the dynamic measurement of the stability of films is described. The rate of film stretching can be controlled, and the lifetime and length of the film before rupture can be detd. Into one of 2 communicating cylindrical glass tubes, 2 vertical, parallel Pt wires are sealed in the top and bottom. They are connected by a horizontal Pt wire at the center. An inert, dust-free gas enters through a 4-way stopcock into either tube and leaves through a trap and rate-controlling rheometer. The liquid (or liquids) is introduced through a ground-glass joint. The film forms at the cross wire as the interface moves past it due to the gas pressure; the breaking length varies with the stretching velocity, and rupture usually occurs near the cross arm. For a water-paraffin oil oleic acid system the film life was 2.0-2.3 sec. with 0.01% oleic acid and stretching rates of 2.4-24.0 mm./sec., and 4.15-4.3 sec. with 0.07% oleic acid and rate 0.0-15.5 mm./sec. Reproducibility for aq. alcohol films in gas was equally good, but the life decreased with increasing stretching velocity. In the first case the effective film thickness was const., in the 2nd its spontaneous and local decrease varied with stretching velocity. K. M. C.

ASB 51A METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

1ST AND 2ND ORDERS 3RD AND 4TH ORDERS

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Smirnova, A. M.

Investigation of the kinetics of the hydration of the cement clinker minerals by radioactive tracer methods. A. M. Smirnova and P. A. Rebinder. *Doklady Akad. Nauk S.S.S.R.* 98, 107-10 (1954).—The rate of reaction in the hydration of tricalcium aluminate, tricalcium and dicalcium silicates is studied by exchanging the cation Ca^{48} from chloride solns. with the common Ca in the cryst. minerals. The specific surface of the cryst. phase is detd. by the absorption of a radioactive indicator from a soln., or from the initial rate of the base exchange (cf. Paneth and Vorwerk, *C.A.* 16, 3784). The decrease of the radioactivity of the Ca^{48}

soln. with time of the base exchange gives the data for the detn. of the rate of the hydration, too. The base-exchange curves as functions of time are not much affected by the hydrolysis and true solubility of the clinker minerals. The influence of the concn. of the Ca^{48} solns., however, is considerable for $3\text{CaO}\cdot\text{SiO}_2$; with increasing chloride concns. (from 0.5 to 2.5 to 10%) the rate of base exchange is considerably reduced, the curves are much flattened, but above 10% this effect is about const. The final expts. were made with 0.25% Ca^{48} solns. Particularly rapid is the base exchange with $3\text{CaO}\cdot\text{Al}_2\text{O}_3$ (38% after 5 min., 75% after 20 min.), and apparently ended after 3 hrs. Evidently, the formation of $3\text{CaO}\cdot\text{Al}_2\text{O}_3\cdot\text{CaCl}_2\cdot n\text{H}_2\text{O}$ proceeds further with time. Considerably slower is the base exchange with $3\text{CaO}\cdot\text{SiO}_2$ and $2\text{CaO}\cdot\text{SiO}_2$ (in the latter only 5% after 20 min., 35% after 6 days, 80% after 20 days). The initial surface reaction is detd. by the rate $V_s = [(d/dt)(i/i_0)]_t$, as a function of the dispersivity of the clinker minerals. The reaction rate of the hydration proper is detd. by Butt's expts. (*C.A.* 43, 8836a), who explains the curves by an increasing reduction of the active surface of the grains with proceeding hydration. $3\text{CaO}\cdot\text{Al}_2\text{O}_3$ as the most active ingredient in portland cements is structurally compared with bentonite in its rapid hydration. Microcleavage and fracturing are strong factors promoting these reactions as hydrolysis in $3\text{CaO}\cdot\text{SiO}_2$ while $2\text{CaO}\cdot\text{SiO}_2$ is practically not hydrolyzed. Base exchange is evidently the first reaction in the hydration mechanism of the clinker minerals as the manifestation of the first interphase boundary (surface) reactions. By tracer methods it will be possible to elucidate the details of the hydration process and the effects exerted by additional agents. W. Eitel

62

①

SMIRNOVA, A.M.; ZAYTSEVA, N.G.; REBINDER, P.A.

Study of the specific surface of individual components of portland cement by means of radioactive tracers. [with English summary in insert] Koll.zhur.18 no.1:93-100 Ja-F '56. (MLRA 9:6)

1. Institut fizicheskoy khimii AN SSSR, Moskva.
(Binding materials) (Radioactive tracers)

SMIRNOVA, A. M.

~~РАДИОИЗВЕЩЕНИЕ~~ V

29(6) P3 PHASE I BOOK EXPLOITATION 200/1408
 Sovershechnye po metodam issledovaniya struktury vysokodispersnykh i poristyykh tel.
 24, Leningrad, 1956.

Metody issledovaniya struktury vysokodispersnykh i poristyykh tel; tradytsionnye
 sposobyy (Methods of Investigating the Structure of Highly Disperse
 and Porous Bodies; Transactions of the Second Conference) Moscow, Izd-vo AN
 SSSR, 1956. 294 p. 2,000 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Institut fizicheskoy khimii and
 Institut khimii silibatorov.
 Prep. Ed.: Rabinin, M.M., Academician; Ed. of Publishing House: Muzumova, L.L.;
 Tech. Ed.: Markovich, S.N.

PURPOSE: This book is intended for scientists, teachers and advanced students
 interested in the structural analysis of highly disperse and porous bodies.

CONTENTS: This collection contains reports by members of various Soviet insti-
 tutions of higher education: Institute of Physical Chemistry, AS USSR;
 Institute of Chemistry, AS Georgian SSR; Fizmatmat. branch, AS USSR;
 Georgian Scientific Research Institute for Petrochem; State Optical Insti-
 tute; Leningrad Technological Institute; Moscow and Leningrad State Universi-
 ties; Leningrad Polytechnic Institute; Agricultural Institute; Leningrad
 Institute of Agricultural Chemistry; Institute of Chemical Physics, Director of the
 Institute of Silicate Chemistry, Akad. Sci. USSR; and reports under the four subject
 divisions (see Table of Contents). The collection includes discussions, con-
 siderations and proposals adopted at the close of the conference.

TABLE OF CONTENTS:

Shubov, S.P., and Ya. A. Pony-Kobits. Comparison of Results Obtained
 From an Investigation of Porous Glass Structures by Small-angle X-ray
 Methods 180
 Discussion (by contributing authors; N.M. Samkin and Ya. V. Mirskiy, Gen-
 erally nefteyemy naucho-issledovatel'skiy institut Gruzuy Scientific
 Research Institute for Petrochem; Yu. A. El'tekov, Institut organizatsionnoy
 khimii imeni N.D. Zelinskogo AN SSSR-Institute of Organic Chemistry Imeni
 N.D. Zelinskii, AS USSR) and M. P. Naplove, Moskovskiy Institut khimicheskoy
 Institut-Moscow Physics and Engineering Institute) 190
 PART VII. METHODS OF DETERMINING THE SPECIFIC
 AREAS OF HIGHLY DISPENSE BODIES
 Davydin, B.V., S.N. Zabayev, M. V. Tulyay, and V.V. Filippovskiy
 (Institute of Physical Chemistry, AS USSR). A Filtration Method of
 Determining the Specific Area of Porous Bodies 203
 Smirnova, A.M., N.G. Zaytseva, and V.P. Subbova (Institute of Physical
 Chemistry, AS USSR). Employing Tagged Atoms to Investigate the Specific
 Character of Cementing Materials during the Hydration Process. 214

AUTHORS: Zaytseva, N.G., Smirnova, A.M. SOV-69-90-5-16/23

TITLE: The Effect of Surface-Active Substances on the Crystallization of Hydrated Tricalcium Aluminate (Vliyaniye poverkhnostno-aktivnykh veshchestv na protsess kristallizatsii trekhkal'tsiyevogo gidroalyuminata)

PERIODICAL: Kolloidnyy zhurnal, 1958, Vol XX, Nr 5, pp 636-639 (USSR)

ABSTRACT: The use of "marked" atoms for determining the specific surface of powder-like substances is difficult, because the surface is not clearly separated from deeper layers. The addition of surface-active substances, like saponin and lignosulfonates (SSB) to powder-like materials is here investigated. Ca^{45} in a calcium chloride solution was used as an indicator. Figure 1 shows that at first the ion exchange is very fast, which indicates an exchange on the surface. If the concentration of the additions is high, the formation of crystal nuclei is retarded. The degree of dispersion of the solid phase is also influenced by the addition of surface-active substances (Figure 2). The maximum of specific surface is reached with additives of high concentration. Figure 3 shows the crystal formations at different concentrations. It is evident that with small additions of surface-active substances, the speed of crystal growth is higher

Card 1/2

SOV-69-20-5-16/25

The Effect of Surface-Active Substances on the Crystallization of Hydrated Tricalcium Aluminate

than the speed of nuclei formation. There are 2 graphs, 3 photos, and 8 references, 6 of which are Soviet, 1 English, and 1 French.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR, Otdel dispersnykh sistem, Moskva (Institute of Physical Chemistry of the USSR Academy of Sciences, Department of Dispersed Systems, Moscow)

SUBMITTED: June 9, 1957

1. Calcium aluminates--Crystallization 2. Wetting agents
--Chemical reactions 3. Ion exchange 4. Calcium isotopes
(Radioactive)--Applications

Card 2/2

SMIRNOVA, A. M.; RAYKOVA, T. V.; BRODOVA, E. I.; KOVARSKAYA, L. B.

Effect of the dispersity of filler and its grinding time on
the physicomechanical properties of polymers. Koll. zhur. 24
no.6:742-748 N-D '62. (MIRA 16:1)

1. Institut fizicheskoy khimii AN SSSR, Moskva.

(Polymers) (Colloids)

SMIRNOVA, A.M.; KOVARSKAYA, L.B.; RAYKOVA, T.V.; TOPOROV, Yu.P.

Effect of the shape of iron powder particles as fillers on the structural and mechanical properties of filled polyethylene. Koll.zhur. 25 no.6:683-688 N-D '63. (MIRA 17:1)

1. Institut fizicheskoy khimii AN SSSR, Moskva.

L 24865-66 EWT(m)/EWP(j)/I/ETC(m)-6 IJP(c) WW/DJ/GS/RM

ACC NR: AT6008941

(A)

SOURCE CODE: UR/0000/65/000/000/0026/0033

AUTHORS: Deryagin, B. V.; Toporov, Yu. P.; Smirnova, A. M.

64

ORG: none

61

B+1

TITLE: Some regularities of the external friction of polymers

SOURCE: Moscow. Institut mashinovedeniya. Plastmassy v podshipnikakh skol'zheniya; issledovaniya, opyt primeneniya (Plastics in friction bearings; research and experiment in application). Moscow, Izd-vo Nauka, 1965, 26-33

TOPIC TAGS: polymer, friction, polyethylene plastic, iron powder, steel, melting point, molecular weight / ShKh15 steel

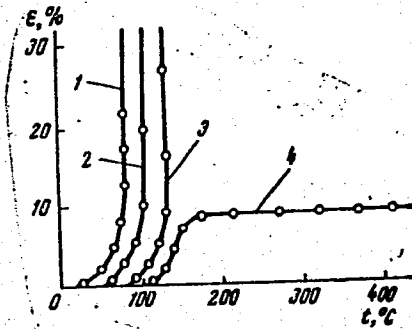
ABSTRACT: The frictional properties of polymers were tested. The work is a continuation of previous work by B. V. Deryagin and Yu. P. Toporov (Dokl. AN SSSR, 1962, 146, 1356). The tests consisted of measuring the static friction force between the upper and lower surfaces of a flat gauge moving in a horizontal plane and between the surfaces of two polymer specimens. The gauges were of ShKh15 steel and had surfaces of 10th-12th class smoothness. Polyethylene with a molecular weight of 20 000 and a melting point of 110C was tested. Dendritic iron was used as a filler. Thermomechanical compression curves of polyethylene were plotted by Kargin's method for a pressure of 40 kg/cm² (see Fig. 1). Specimens with 0, 80,

Card 1/2

L 24865-66

ACC NR: AT6008941

Fig. 1. Relative deformation of polyethylene versus temperature for: 1 - 0% Fe; 2 - 50% Fe; 3 - 80% Fe; 4 - 90% Fe.



and 90% filler were used to study frictional properties. It is found that filling the polyethylene with highly dispersed iron has practically no effect on its frictional properties under conditions of static friction over a wide range of normal loads. The filler increases both the mechanical strength of the specimens and their ability to withstand a normal load. Orig. art. has: 2 formulas and 8 graphs.

SUB CODE:07, 11/SUBM DATE: 31Jul65/ ORIG REF: 009/ OTH REF: 001

Card 2/2 dda

L 00750-66 EWT(m)/EPF(c)/EWP(j)/I/ETG(m) RPL WW/RM

ACCESSION NR: AP5020967

UR/0190/65/007/008/1344/1347

12
38 P
4455
4455

AUTHOR: Zubov, P. I.; Smirnova, A. M.; Raykova, T. V.

TITLE: Preparation of organodispersions of chlorinated polyvinyl chloride

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 8, 1965, 1344-1347

TOPIC TAGS: polyvinyl chloride, chlorinated organic compound, chemical dispersion, block copolymer, polymerization, acrylonitrile, plastic film

ABSTRACT: Improvement in the properties of film forming chlorinated PVC was attempted by radical polymerization of acrylonitrile in its solutions. Organodispersions were formed by polymerizing 3-15% acrylonitrile in 10-20% solutions of chlorinated PVC (containing 61% Cl), and the physico-chemical properties of the modified PVC were determined. With a given acrylonitrile concentration the ratio of Cl-PVC: PAN (polyacrylonitrile) in the product was constant, regardless of initial Cl-PVC concentration. It was thus concluded that graft copolymers were formed. The viscosity of the organodispersion was reduced as the PAN

Card 1/2

L 00750-66

ACCESSION NR: AP5020967

content increased, while the strength of the film formed therefrom was somewhat higher than strength of Cl-PVC film. The elasticity was essentially the same up to ~ 24% PAN and with more PAN the film became brittle. The viscous flow and glass temperatures of the materials increased with increase in PAN content. The values of the thermomechanical properties of the graft copolymers were also higher than those of mechanical mixtures of homopolymers of Cl-PVC and PAN. Orig. art. has: 2 tables and 5 figures.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry AN SSSR) 4455

SUBMITTED: 04Sep64

ENCL: 00

SUB CODE: MT, GC

NR REF SOV: 004

OTHER: 000

Card 2/2

SLOBODIN, Ya.M.; MAYOROVA, V.Yo.; SMIRNOVA, A.M.

Dehydration of dimethylakylcarbinols. Zhur. org. khim. i no.9:
1529-1531 S '65. (MIRA 18:12)

1. Submitted April 28, 1964.

VAL'DMAN, A.A.; SMIRNOVA, A.M.

Experimental investigation of the therapeutic effect of levomycetin
in paratyphoid infection. Zhur.mikrobiol.epid.i immun. no.2:50-59
F '54. (MIRA 7:3)

1. Iz otdela patologicheskoy anatomii (zaveduyushchiy - akademik
N.N.Anichkov) Instituta eksperimental'noy meditsiny Akademii medi-
tsinskikh nauk SSSR. (Paratyphoid fever) (Chloramphenicol)

FD-2326

SMIRNOVA, A.M.
USSR/Medicine - Salmonellosis, Paratyphoid

Card 1/1 Pub 148 - 27/36

Author : Smirnova, A. M.

Title : ~~Experimental investigation of the paratyphoid infection brought about by Gaertner bacilli~~
 : Experimental investigation of the paratyphoid infection brought about by Gaertner bacilli

Periodical : Zhur. mikro. epid. i immun. No 2, 76-80, Feb 1955

Abstract : Found that Gaertner bacilli bring about a disease of the typhoid type in mice rather than a gastroenteritis similar to that produced by a salmonellae food infection in humans. Concludes on the basis of this that salmonellae of the Gaertner and Breslau types are more closely related to paratyphoid A and paratyphoid B bacilli than is generally assumed.

Institution : Chair of Microbiology, 1 st Leningrad Medical Institute imeni Academician I. P. Pavlov and Division of Pathological Anatomy, Institute of Epidemiology and Microbiology

Submitted : February 17, 1954

SMIRNOVA, A.M., kandidat meditsinskikh nauk; EL'PERIN, Ye.Z., kandidat meditsinskikh nauk

Materials on the clinical and immunological characteristics of rheumatic fever in children. Vop.okh.mat. i det. 1 no.5:34-39 S-0 '56.

(MIRA 9:11)

1. Iz otdela mikrobiologii (zav. - prof. V.I.Ioffe) Instituta eksperimental'noy meditsiny i iz revmaticheskogo otdleniya Gosudarstvennogo nauchno-issledovatel'skogo pediatricheskogo instituta (dir. - prof. A.L.Libov), Leningrad.
(RHEUMATIC FEVER)

SMIRNOVA, A. M.; ZALESSKAYA, V. V.; FILATOVA, Z. V.; RUREL, N. N.;
TIFONOV, V. I.; SOFONOV, E. N.; PETROPAVLOVSKAYA, N. A.

"Special features of the microbiological immuno-epidemiological
characteristics of scarlet fever treated with penicillin."

Report submitted at the 13th All-Union Congress of Hygienists,
Epidemiologists and Infectionists. 1959

SMIRNOVA, A.M.; RAPOPORT, Zh.Zh.

Amount of C-reactive protein and antifibrinolysin in the blood
of patients during the period between attacks. *Pediatrics* 38
no.8:17-21 Ag '60. (MIRA 13:12)

1. Iz otdela mikrobiologii (zav. - chlen-korrespondent kafedry
propedevtiki detskikh bolezney AMN SSSR prof. V.I. Lofe)
Instituta eksperimental'noy meditsiny AMN SSSR (zav. - prof.
A.B. Volovik) Leningradskogo meditsinskogo instituta.
(RHEUMATIC FEVER) (BLOOD PROTEINS) (FIBRINOLYSINS)

RAPOPORT, Zh.Zh.; SMIRNOVA, A.M.

Diagnostic value of determining antistreptolysine-O in the blood
of children suffering from rheumatic fever. Vop.revm. 1 no.4:
23-28 O-D '61. (MIRA 16:3)

1. Iz kafedry propedevtiki detskikh bolezney (zav. - prof. A.B.
Volovik) Leningradskogo pediatricheskogo meditsinskogo instituta
i otdela mikrobiologii (zav. - chlen-korrespondent AMN SSSR prof.
V.I. Ioffe) Instituta eksperimental'noy meditsiny AMN SSSR.
(HEMOLYSIS AND HEMOLYSINS) (RHEUMATIC FEVER)

SMIRNOVA, A.M., kand.med.nauk; GRIGOR'YEVA, O.D., kand.med.nauk

Clinical serological parallels in rheumatic fever. Vop.pat.krovi
i krovoobr. no.6:80-88 '61. (MIRA 16:3)

1. Iz Fakul'tetskoy terapevticheskoy kliniki Leningradskogo pedia-
tricheskogo meditsinskogo instituta (zav. - prof. V.A. Val'dman)
i Otdela mikrobiologii Instituta eksperimental'noy meditsiny AMN
SSSR (zav. - chlen-korrespondent AMN prof. V.I. Ioffe).
(RHEUMATIC FEVER) (SEROLOGY)

GRINBAUM, N.B.; SMIRNOVA, A.M.

Types of curves of streptococcal antigen in patients with a first attack of rheumatic fever. *Pediatrics* no.8:42-47 '61.
(MIRA 14:9)

1. Iz kafedry pediatrii (zav. - prof. E.A. Gornitskava) i Leningradskogo meditsinskogo instituta imeni akad. I.P. Pavlova i otdel' mikrobiologii (zav. - chlen-korrespondent AMN SSSR prof. V.I. Loffe) Instituta eksperimental'noy meditsiny AMN SSSR.
(RHEUMATIC FEVER) (STREPTOCOCCUS)

GRINBAUM, N.B.; SMIRNOVA, A.M.

Streptococcal antigen and antibodies in the sera of children with a first attack of rheumatic fever. Vop. okh. mat. i det. 6 no.9: (MIRA 14:9)
32-36 S '61.

1. Iz kafedry pediatrii (zav. - prof. E.A.Gornitskaya) i Leningradskogo meditsinskogo instituta imeni akademika I.P.Pavlova i otdela mikrobiologii (zav. - chlen-korrespondent AMN SSSR prof. V.I.Ioffe) Instituta eksperimental'noy meditsiny AMN SSSR.
(RHEUMATIC FEVER) (STREPTOCOCCUS)

RAPOPORT, Zh.Zh.; SMIRNOVA, A.M.

Immunological indexes of the activity of rheumatic fever in children
at various stages of the disease. Zhur.mikrobiol. epid. i immun.
32 no.4:46-49 Ap '61. (MIRA 14:6)

1. Iz Leningradskogo gosudarstvennogo peidatricheskogo instituta
i iz Instituta eksperimental'noy meditsiny AMN SSSR.
(RHEUMATIC FEVER)

RAPOPORT, Zh.Zh.; SMIRNOVA, A.M.

Clinical immunological characteristics of chorea in children.
Zhur. nevr. i psikh. 61 no.7:995-999 '61. (MIRA 15:6)

1. Kafedra propedevtiki detskikh bolezney (zav. - prof.
A.B. Volovik) Leningradskogo pediatricheskogo meditsinskogo
instituta i otdel mikrobiologii (zav. - prof. V.I. Ioffe)
Instituta eksperimental'noy meditsiny.

(CHOREA)
(IMMUNOLOGY)

SMIRNOVA, A.M.; RAPOPORT, Zh.Zh.

Content of C-reactive protein in the blood of children with
rheumatism. Sov. med. 25 no.4:53-57 Ap '62. (MIRA 15:6)

1. Iz otdela mikrobiologii (zav. - prof. V.I. Ioffe) Instituta
eksperimental'noy mikrobiologii ANN SSSR i iz kafedry propedevtiki
detskikh bolezney (zav. - prof. A.B. Volovik) Leningradskogo
pediatriceskogo instituta.

(PROTEINS)
(RHEUMATIC FEVER)

GRIGORYEVA, G.S., Grad. med. nauk; SMIRNOVA, A.M., kand. med. nauk.

Some clinical and laboratory observations in rheumatic fever and focal infections. Trudy IIMT 31 no.2:336-348 '63. (MIRA 17:10)

1. Iz fakul'tetskoj terapevticheskoj kliniki Leningradskogo pedia-
tricheskogo meditsinskogo instituta i Otdela mikrobiologii Instituta
epidemiologii i mikrobiologii ANU SSSR.

Smirnova, A. N.

MD ✓ The biochemical characteristics of Turkmen grape varieties. A. N. Smirnova. *Invest. Akad. Nauk Turkmen. S.S.R.* 1954, No. 1, 68-61; *Referat. Zhur. Khim., Biol. Khim.* 1955, No. 183.—Terbash and Kara-Uzyum, two of the most widely distributed grape varieties, attain a sugar content of 28-30% and a low acid content (0.34% calcd. as tartaric acid). The sugar/acid ratio is 80-70 (for the Don and Michurin varieties it is 18.8 and 4.5, resp.). As the grapes ripen the content of sugar rises and of the acid declines. Glucose, fructose, and sucrose are the sugars found. The vitamin C content is 15 mg.% in Turkmen grapes, as compared with 6.65 mg.% for Crimea varieties. B. S. L.

SMIRNOVA, A.N.

Biochemical characteristics of some vegetables cultivated in Turkmenistan. Izv.AN Turk.SSR no.2:68-73 '56. (MLRA 9:8)

1. Institut biologii AN Turkmenskoy SSR.
(Turkmenistan--Vegetables)

LOZINSKIY, A.M.; PODOBED, V.V.; SMIRNOVA, A.N.; SULIM, V.A.

Cameras for photographing satellites. Astron. tsir. no.191:3-5
My '58. (MIRA 11:9)
(Artificial satellites) (Astronomical photography)

BELYANCHIKOV, V.N., inzh.; NOVIKOV, I.V., inzh.; ZAYTSEV I.Ye.,
inzh.; AKIL'YEV, S.A., inzh.; BELKIN, V.A., inzh.;
POCHKINA, L.A., inzh.; VASIL'YEV, O.A., inzh.; Prinsipali
uchastiye: KOPEYKINA, O.P.; SMIRNOVA, A.N.; BELKINA, S.S.;
SHILINA, Ye.I.; LAGUNOV, Ye.N.; REZNIK, S.Z.; BRISMAN,
B.I.; KUZ'MINYKH, A.A., ~~red. izd-ya~~; SHIBKOVA, R.Ye.,
tekh. red.

[Operational life of parts of excavating, construction,
and road machinery; a reference catalog] Sroki sluzhby de-
talei ekskavatorov, stroitel'nykh i dorozhnykh mashin,
katalog spravochnik. Izd.2., perer. i dop. Moskva, Gos-
lesbumizdat. Pt.2. [Road, construction machinery, and
machinery for manufacturing building materials] Dorozhnye,
stroitel'nye mashiny i mashiny dlia proizvodstva stroitel'-
nykh materialov. 1963. 306 p. (MIRA 17:4)

1. "Stroitiyazhmashzapchast'," Tekhnicheskaya kontora. Kon-
struktorskoye byuro.

SMIRNOVA, A.N.

Role of some mostly widespread algae as sanitary indicators.
Gidrobiol. zhur. 1 no.4253-60 '65. (MIRA 18:10)

1. Khar'kovskiy VODOKANALNIIPROYEKT.

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11. 11. 11. -- "Volumetric Relations in Aqueous Solutions." Sub
4 Feb 52, Order of the Labor of the Physicochemical Inst Irani L. Ya.
Karnov. (Dissertation for the Degree of Candidate in Chemical Sciences).

00: Vechernaya Zvezda January-December 1952

VOIKOVA, T.P.; SMIRNOVA, A.P.

Composition of fillers and their retention in paper. Bum.prom.
35 no.3:16-18 Mr '60. (MIRA 13:6)

1. Ukrainskiy nauchno-issledovatel'skiy institut tsellyulozno-
bumazhnoy promyshlennosti.
(Fillers (In paper, paint, etc.))

SMIRNOVA, A. P.

Derivation of the autolysis of precipitation of wine yeast.
A. P. Smirnova (Moscow Tech. Inst. Nutrition Ind.).
Voprosy Pivovarysho S.S.R. 15, No. 7, 41-4 (1955).—

1

In a circulating blend before fermentation, the introduction of denatured yeast mash intensifies the process, resulting in a more rapidly formed champagne and an improvement in its quality. The best yeast autolyzate is prepd. by warming the yeast at 70-90° or chilling at -10°. Combined treatment at high (70°) and low (-10°) temps. gives a marked change in the quality of champagne. Shirley B. Radding

med

SMIRNOVA, A. P. Cand Tech Sci -- (diss) ^{Effect} "The ~~Influence~~ of Yeast
Autolysates on the Quality of ^{stored} ~~Stored~~ Champagne." Mos, 1957.
14 pp 24 cm. (Min of Higher Education USSR, Mos Engineering Inst of
Food Industry) (KL, 26-57, 109)

SMIRNOVA, A.P.

Effect of the composition of medium on the fermentation activity of
the hypogeous culture of mold fungi. Trudy TSNIISP no.6:123-130
'58. (MIRA 14:12)

(Molds (Botany)) (Fermentation)

SHABAROV, Yu.S.; SMIRNOVA, A.P.; LEVINA, R.Ya.

Adducts of azodicarboxylic ester in the synthesis of bicyclic compounds with two common nitrogen atoms: 4-aryltriazoledino-(1,2-1',2')- Δ^4 -tetrahydropyridazines and their derivatives. Zhur.ob.khim. 34 no.2: 390-394 F '64. (MIRA 17:3)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.

SMIRNOVA, A.P., red.

[Sanitary equipment made of polymer materials; practices
in foreign countries] Sanitarno-tekhnicheskoe oborudovanie
s primeneniem polimernykh materialov; zarubezhnyi opyt.
Moskva, Stroiizdat, 1964. 148 p. (MIRA 17:12)

1. Moscow. Nauchno-issledovatel'skiy institut sanitarnoy
tehniki.

PROCESSES AND PROPERTIES INDEX

F SMIRNOVA, A P. *m*

4168. EXPERIENCE IN INSTALLATION OF VINIIT TYPE PNEUMATIC FUEL SPREADER. Smironov, AP., Dubrovin, IV and Kaplan, VM. (Za Ekon Topliva (Fuel Econ.), 1949, (12), 7-9). This type was designed for converting hand fire boilers of about 7.5 sq. meters grate area. The spreader is installed above the existing fire door, so that hand firing remains possible. The fuel passes from an overhead hopper through a feeding device, consisting of a variable speed drum with vanes, on to a distributor plate. Air at 300-400 mm head of water is fed to a series of 9-11 nozzles and blows the fuel from this plate, over the fire. To ensure even distribution over the grate area, the nozzles are fanned outwards slightly and are in groups of 2 or 3 each with a valve for regulating air pressure.

MATERIALS INDEX

ASM - S.A. METALLURGICAL LITERATURE CLASSIFICATION

147000 148000 149000 150000 151000 152000 153000 154000 155000 156000 157000 158000											
159000 160000 161000 162000 163000 164000 165000 166000 167000 168000 169000 170000											

SMIRNOVA, A. F.

"Investigation of Some Properties of Stannates and Tungstenates of Elements of the Second Group." Cand Tech Sci, Leningrad Order of Labor Red Banner Technological Institute, Lensovet, Min Higher Education USSR, Leningrad, 1954. (KL, No 7, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

GINSTLING, A.M., doktor tekhn. nauk; SMIRNOVA, A.P., kand. tekhn. nauk

Modern plate-type heat exchangers. Bum. prom. 34 no.5:7-11 My
'59. (MIRA 12:6)

1. Leningradskiy tekhnologicheskiy institut tsellyulozno-bumazhnoy
promyshlennosti.

(Heat exchangers)

BONDAR', F.I.; YERESNOV, N.V.; SEMENOV, S.I.; SUROV, I.Ye.;
KONYUSHKOV, A.M., kand. tekhn. nauk, nauchn. red.;
SMIRNOVA, A.P., red.; GOL'BERG, T.M., tekhn. red.

[Special water-intake structures] Spetsial'nye vodozabor-
nye sooruzheniia. [By] F.I.Bondar' i dr. Moskva, Gosstroiz-
dat, 1963. 367 p. (MIRA 17:1)

S/2535/63/000/154/0070/0080

ACCESSION NR: AT4031065

AUTHOR: Starik, D. E. (Candidate of Technical Sciences); Smirnova, A. P. (Engineer);
Yegorov, V. M. (Engineer)

TITLE: The planning of work according to the experimental-structural theme

SOURCE: Moscow. Aviatsionnyy institut. Trudy*, no. 154, 1963. Ekonomicheskaya
effektivnost' aviatsionnoy tekhniki (economic efficiency in aeronautical engineering),
70-80

TOPIC TAGS: economic efficiency, expenditure, experimental structural theme,
operation planning, calendar planning

ABSTRACT: The authors shed light on some questions of preliminary determination of
the expenditures on an experimental-structural theme and associated problems of
operation-calendar planning for experimental production. The basis for the initia-
tion of the experimental-structural work includes: the naming of products, the
object for which the product is intended, the product customer, the neighboring
organizations, the amount of products sent to the customer and the completion per-
iods, and sources of financing (state budget or self-support). The results were

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ACCESSION NR: AT4031065

presented in graphs and tables. The authors also determined the work capacity of fulfilling the stages and substages, and showed the composition of the planned calculation. Orig. art. has: 3 figures and 3 tables.

ASSOCIATION: Moscow Aviatzionnyy institut (Moscow Institute of Aeronautics)

SUBMITTED: 00

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NO REF SOV: 000

OTHER: 000

Card 2/2

KASTAL'SKIY, Aleksandr Aleksandrovich; RODZILLEN, I.D., kand.
tekhn. nauk, retsenzent; SMIRNOVA, A.P., red.;
BOROVNEV, N.K., tekhn. red.

[Designing of plants for the chemical demineralization of
water] Proektirovanie ustanovok dlia khimicheskogo obes-
solivaniia vody. Izd.2., perer. i dop. Moskva, Stroi-
izdat, 1964. 210 p. (MIRA 17:3)

DELYAGIN, N.N.; RYAZANOV, V.L., inzh., nauchn. red.; SMIRNOVA,
A.P., red.

[Purification of phenolic waste waters; operational
practices] Ochistka fenol'nykh stochnykh vod; iz opyta
ekspluatatsii. Moskva, Stroiizdat, 1965. 90 p.
(MIRA 18:3)

KOKORIN, Oleg Yanovich; GOGOLIN, A.A., doktor tekhn. nauk,
nauchn. red.; KAMENEV, P.N., doktor tekhn. nauk, red.;
NESTERENKO, A.V., doktor tekhn. nauk, red.; SMIRNOVA,
A.P., red.

[Evaporation cooling systems for air conditioning] Ispa-
ritel'noe okhlazhdenie dlia tselei konditsionirovaniia
vozdukha. Moskva, Stroiizdat, 1965. 158 p.

(MIRA 18:5)

SMIRNOVA, A.S.

Lussatite from Transcaucasian chalcedony deposits. Zap.Vses.-
min.ob-va. 92 no.2:248-250 '63. (MIRA 16:5)
(Transcaucasia--Chalcedony)