

YAMNOVA, M.A.; YEFIMOVA, N.N.; SOLENOVA, A.M.

Using a Bashkirov knotter for placing bobbins on warping machines;  
Obm.tekh.opyt. [MIP] no.15:17-19 '56. (MIRA 11:11)  
(Warping machines)

SUSHILINA, P.I.; SCIENOVA, A.M.

Improving the operation of drawing the thread through the heddle.  
Obm.tekh.opyt. [MLP] no.15:33-34 '56. (MLRA 11:11)  
(Weaving)

SOLENOVA, M. G.

Organizatsiya i oplata truda v polevodcheskoy brigade kolkhoza (Organization and wages of labor in the farming brigade of a kolkhoz, by) I. A. Kobchikova (1)  
M. G. Solenova. Moskva, Sel'khozgiz, 1953.  
171 p. illus., tables.

N/5  
722.101  
.K81

D.3000, D.3100

78073  
SOV/62-60-1-19/37

AUTHORS:

Struchkov, Yu T., Solenova, S. L.

TITLE:

Steric Hindrance and Molecule Conformation.  
Communication I. Steric Hindrance in Molecules of  
Polyhalogenated Benzenes and Their Derivatives

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh  
nauk, 1960, Nr 1, pp 104-110 (USSR)

ABSTRACT:

X-ray structural analysis was made of 15 polyhalogenated  
benzenes and their derivatives. The value of D  
(distances between the centers of nonbonded atoms), D'  
(sum of the corresponding intermolecular radii),  
 $\Delta D = D' - D$  (expressing the steric interaction between  
the given atom pair), and  $\sum \Delta D$  (conventional measure  
of the total steric hindrance computed for all atom  
pairs in the molecule) were determined. The analysis  
indicated the presence of a substantial steric  
hindrance in the majority of the compounds investigated;  
the highest was shown in 2,4,6-trichloronitrobenzene and

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Communication I.

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2,6-diodo-4-nitroanisole. In the former, the nitro group must be located at a right angle in relation to the ring plane; in the latter, the methoxy group must be also at a right angle to the ring plane. The remaining steric hindrance is still quite considerable in the above configurations, so that deformation of the bond angles must be expected. Since a high degree of bond angle deformation was found in 2,4,6-trichlorobromobenzene ( $\sum \Delta D = 1.58\text{\AA}$ ), measurable angle deformations should be found in all molecules with  $\sum \Delta D > 1.6\text{\AA}$ . This was found to be true in 9 of the compounds investigated. There are 17 figures; 1 table; and 7 references, 1 U.S., 1 U.K., 5 Soviet. The U.S. and U.K. references are: Steric Effects in Organic Chemistry, (Melvin S. Newman, ed.), New York (1956); E. Harnik, F. H. Herbstein, G. M. Schmidt, F. L. Hirshfeld, J. Chem. Soc., London, (1954) 3289.

ASSOCIATION:

Institute of Elemento-Organic Compounds, Academy of Sciences USSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)  
June 14, 1958

SUBMITTED:

Card 2/2

USSR / General and Specialized Zoology.

Insects, Pests of Food

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652210009-5"

Abs Jour : Ref Zhur - Biologiya, No 16, 1958, No. 73686  
Author : Rumyantsev, P. D.; Ratanova, V. F.; Solenova, Ye. A.  
Inst : All-Union Sc.-Res. Inst. of Grain and the Processing of Its Produce  
Title : Toxic Action of Aluminum Phosphid on Grain Pests  
Orig Pub : Tr. Vses. n.-1. in-t zerna i produktov yego pererabotki, 1957, vyp. 33, 55-71

Abstract : The minimum norm for the use of 90% AlP on the feeding stages of mites, curculionid beetles, and pea weevils under hermetic conditions is less than 15 g/m<sup>3</sup>. When H<sub>3</sub>P is applied, the mites (particularly Glycyphagida) perish in less than 24 hours under optimum conditions of fumigation, but curculionid beetles and weevils are not destroyed before the 4th - 8th day. In their

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STRUCHKOV, Yu.T.; SOLENOVA-SIDOROVA, S.L.

Crystalline structure of 2,4,6-trichlorobromobenzene. Vest Mosk.  
un. Ser. mat., mekh., astron., fiz., khim. 14 no.2:157-168 '59  
(MIRA 13:3)

1. Kafedra kristallografii i kristallokhimii Institut elemento-  
organicheskikh soyedineniy AN SSSR.  
(Benzene)

PLYASKIN, I.I., kand.tekhn.nauk; SOLENTSOV, A.A.

Working flooded Oligocene sands in the Sarbay Pit. Ger. zhur. no.8:  
70 Ag '63. (MIRA 16:9)

1. Filial Kazakhskego proyektno-tekhnologicheskogo instituta, g.  
Rudnyy (for Plyaskin). 2. Sekolevske-Sarbayskiy gornobogatitel'nyy  
kombinat (for Solentsov).

(Kustanay Province—Mine drainage)

BELYKH, K.D.; kand. tekhn. nauk (Dneprodzerzhinsk); TLEUGABYLOV, Zh.Kh. (Rudnyy); KOSTYUCHENKO, K.I. (Rudnyy); SOLENTSOV, A.S. (Rudnyy); MEL'NICHENKO, A.I.; GLEYZEROV, A.V., inzh.-mekhanik; ZDOROVENKO, LP., mostovoy master

Cleaning tracks with jet snow plows. Put' i put. khoz. 9 no.1:34-36 '65 (MIRA 18:2)

1. Dnepropetrovskiy metallurgicheskiy kombinat (for Belykh).
2. Nachal'nik konstruktorskogo otdela Sokolovsko-Sarbaynskogo gornoobogatitel'nogo kombinata (for Treugabylova).
3. Starshiy inzh. Sokolovsko-Sarbaynskogo gornoobogatitel'nogo kombinata (for Solentsov).
4. Nachal'nik Kiyevskoy distantzii puti (for Mel'nichenko).
5. Kiyevskaya distantsiya puti (for Gleyzerov).
6. Nachal'nik otdela mekhanizatsii sluzhby puti Pribaltiyskoy dorogi, Riga (for Tershovskiy).
7. Darnitskaya distantsiya puti Yugo-Zapadnoy dorogi (for Zdorovenk).



24(4)

AUTHOR:

Šolér, Kliment, Doctor

CZECH/14-50-8-3/68

TITLE:

The Atomic Battery - An Urgent Problem

PERIODICAL:

Sdělovací technika, 1959, Nr 8, pp 282-283

ABSTRACT:

The author deals with the advantages of atomic batteries in modern technology and describes the various types produced today as well as the possibilities of using them. Batteries are an attempt to transform nuclear energy directly into electrical energy. The service life of an atomic battery is much longer than that of a chemical one. Their source of radiation is artificially prepared radioactive isotopes, especially those formed in nuclear reactors. The first experiments were made with the Sr-90 isotope. Two types of atomic batteries are mostly used today: the high and low voltage battery. The high-voltage battery is loaded with electrically charged elements formed during radioactive fission. These elements are mostly electrons emitted by radioactive substances in the form of  $\beta$  -rays. The diagram of such a battery is presented

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## The Atomic Battery - An Urgent Problem

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in Fig 1. A is the source of  $\beta$ -rays and at the same time the positive electrode of the battery. I is the insulating stratum. K is the electrode collecting the electrons and is also the negative electrode of the battery. The maximum voltage of the battery depends on the energy of the emitted  $\beta$ -rays and on the quality of the insulation and can reach several thousand volts. This kind of battery operates reliably even at very low temperatures. The low-voltage atomic battery uses as a source of electricity the so-called elementary semi-conductors, more particularly germanium and silicon. Into the polycrystal part of such a substance, impurities of type p or type n are introduced, thus the p-n transition is formed, which has in one part an electron conductivity and in the other a p-type-conductivity. Unlike the high voltage batteries, in these batteries the carriers of electricity are not elements emitted by a radioactive substance. The magnitude of the electromotive force and the intensity of the current depend on the size of the semi-conductor, on the intensity of radiation and on the external

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resistance. When the surface of the p-n transition is  $0.25 \text{ cm}^2$  and the source of radiation Sr-90 with an activity of 50 millicurie, the following results are obtained: with germanium, without loading the electromotive force, 30 mV and with short circuit a current of  $2.5 \times 10^{-5} \text{ A}$  is achieved; with silicon the electromotive force is about 250 mV, the current  $1 \times 10^{-5} \text{ A}$ . In his conclusion, the author states that hitherto no great results were achieved in using radioactive energy without the intermediary of thermal energy. Better results were obtained using sunlight instead of radioactive radiation for the semi-conductor batteries. Experiments with sunlight were carried out in the Soviet-Union by Vavilov. The solar battery was also used in the third Soviet satellite. There are 3 diagrams, 1 circuit diagram and 4 references, 2 of which are Soviet, 1 German and 1 Czech.

Card 3/3

SCLER, K.

"History of physics" by Max von Laue. Reviewed by K. Scler. Pckrcky  
mat fyz astr 5 no. 1:123-124. '60

SCLEP, K.

"Physical foundations of releasing the nuclear energy" by V. A. Michajlov. Reviewed by K. Scler. Pckroky mat fyz astr 5 no. 1: 123. '60

SOLFR, K.

"Crystal electron tubes" by H. Frank and V. Snajdar. Reviewed by K. Soler. Pokroky mat fyz astr 5 no. 1:124-125, '60.

26.1650

26845  
Z/028/61/000/001/002/002  
D244/D306

AUTHOR: Soler, Kliment (Prague)

TITLE: Nuclear batteries

PERIODICAL: Pokroky matematiky, fyziky a astronomie, no. 1,  
1961, 15 - 23

TEXT: The author gives a general description of the development and the principle design of various types of nuclear batteries. Nuclear batteries can be classified into the following types: (1) Directly-charged nuclear batteries. They consist of a primary source of energy ( $\alpha$  or  $\beta$ -emitter) and a suitable collector electrode. A  $\beta$ -battery, used to charge the Soviet DK-0.2 pocket dosimeter is described by G. D. Orlovoy and E. G. Kardash: The primary source consists of 12 millicuries of Sr-90/Y-90 (but tests with Pm-147, H-3, and Er-196 isotopes are presently being performed); the insulator consists of a  $15\mu$ -thick polyethylene layer; the collector consists of 4 mm thick Mg with a 4 mm thick Pb coat to reduce the Brems-strahlung on the sur-

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X

Nuclear batteries

face of the cell to 2  $\mu$ r. This cell is very small, delivers 300 V, a short-circuit of 10<sup>-10</sup>A, and has a capacity of 10 mmF. (2) Semiconductor (p-n) junction nuclear batteries deliver larger amperages, but lower voltages. They consist of a Ge or Si crystal with p-n junction, covered with a thin layer of 50 milligrams of Sr-90/Y-90. The Ge cell has an emf of 30 mV and a short-circuit current of 2.5 $\cdot$ 10<sup>-5</sup>A, the Si cell has an emf of 250 mV and a short-circuit of 1 $\cdot$ 10<sup>-5</sup>A. The efficiency of these batteries drops rapidly since the crystal lattice is damaged by the radiation. This can be prevented either by using a suitable scintillator (a phosphor which converts the radiation into light which, in turn, is used to excite the p-n junction), or by using a soft  $\beta$ -emitter such as Ni-63. (3) Contact-potential nuclear batteries employ an isotope to ionize a gas which is situated in an electric field obtained by the contact-potential difference of two electrodes. The ions produced in the gas move under the influence of the electric field to produce a current. The efficiency of this battery type is rather low (approx-

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Nuclear batteries

imately 1%) and a recombination of ions must be prevented by choosing a suitable gas and an advantageous electrode pair. Argon with an addition of tritium-containing hydrogen is considered a suitable gas, a suitable electrode pair is  $PbO_2/Mg$  which gives an emf of 1.6 V. (4) Thermoelectric nuclear batteries employ thermocouples which absorb heat produced as radioactivity. This battery type is capable of exploiting all three types of radiation ( $\alpha$ ,  $\beta$ , and  $\gamma$ ), however, its efficiency is very low (0.2%). In conclusion the author states that batteries reach considerably higher efficiencies when excited by sunlight instead of nuclear radiation (solar batteries). [Abstracter's note: No other data given] Vavilov described a solar battery composed of 432 Si cells which had an output of 10 w at 200 V. Solar batteries were successfully used in the third Soviet satellite. There are 1 table, 5 figures and 5 Soviet-bloc references. X

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KRAEMER, Emil; SOLER, Kliment

Scientific institutes for workers' college education affiliated to our higher schools. Poroky mat fyz astr 7 no.1:34-35 '62.

1. Ustav dalkoveho studia Karlovy university, Celetna 20, Praha I (for Kraemer).

SOLER, Kliment

"Teaching physics; methodical handbook for the teacher."  
Reviewed by Kliment Solar. Pokroky mat fyz astr 8 no.2:93-94, '63.

SOLER, K.

"Chapters from didactics of physics" by E. Kaspar. Reviewed  
by K. Soler. Pokroky mat fyz astr 5 no.6:784-786 '60.

SOLER, K.

The 1st Conference of Czechoslovak Historians of Natural,  
Medical and Technical Sciences. Pokroky mat fyz astr 5  
no.6:775-776 '60.

SOLTSKIY, G.I.

Some results of investigating undigested food remains of predatory birds and their use for faunistic purposes. Zool. zhur. 40 no. 1:84-92 Ja '61. (MIRA 14:2)

1. Guryev Anti-Plague Station.  
(Guryev Province---Owls) (Birds---Food)

SOLETSKIY, G.K.

Species met with and abundance of rodents in the western Ust-Urt.  
Zool. zhur. 40 no.5:782-784 '61. (MIRA 14:5)

1. Gur'yev Anti-Plague Station.  
(Ust-Urt—Rodentia)

SOLITSKIY, Ye.V.; GILBERT, R.F.

Method for determining the mean reservoir pressure in a gas pool.  
Gaz prom. 8 no.4:10-11 '63. (HRA 17:10)



SOLEWSKI, Wladyslaw, dr.

The brook trout "Salmo trutta morpha farie L." in the Upper San river basin. Acta hydrobiol 4 no.1:47-57 '62.

1. Zakład Biologii Wod, Polska Akademia Nauk, Krakow, ul. Slawkowska 17.

SOLEWSKI, Włodzimierz, dr

The trout (*Salmo trutta m. fario* L.) of Pradnik Brook. Acta hydrobiol 4 no.3/4:267-275 '62.

1. Zakład Biologii Wod, Polska Akademia Nauk, Krakow.

SOLEWSKI, Wlodzimierz

"Fish anatomy and embryology" by Zygmunt Grodzinski. Reviewed  
by Wlodzimierz Solewski. Wszechswiat no.6:165-166 Je '62.

SOLEWSKI, Wlodzimierz, dr

The grayling (*Thymallus thymallus* L.) of the Rogoznik Stream.  
Acta hydrobiol 5 no.2/3:229-243 '63.

1. Zaklad Biologii Wod, Polska Akademia Nauk, Krakow,  
Slawkowska 17.

SOLEWSKI, Wlodzimierz, doc. dr

The brook trout (*Salmo trutta morpha fario* L.) in certain  
Carpathian rivers in Poland. *Acta hydrobiol* 6 no.3:227-253  
'64.

1. Institute of Water Biology Academy of Sciences, Krakow.

GOROBETS, A.K., inzh.; KOVSHULYA, F.A., inzh.; SOLGALOV, E.V., inzh.;  
TORGOVNIKOV, B.M., inzh.

Results of testing new sprayers. Bezop.truda v prom 4 no.6:10-12  
Je '60. (MIRA 14,5)

1. Kemerovskiy nauchno-issledovatel'skiy institut gornorudnoy  
promyshlennosti  
(Spraying and dusting equipment—Testing)

SOLGALOV, E.V., gornyy inzh.; GORBETS A.K., gornyy inzh.

Ventilation arrangements in stopes where the method of top slicing  
is used. Gor.zhur. no.3:30-33 Mr '61. (MIRA 1413)

1. Nauchno-issledovatel'skiy gornorudnyy institut, Krivoy Rog.  
(Krivoy Rog Basin--Mine ventilation)

SOLGALOV, E.V., inzh.

Dust formation caused by the explosion of put-on charges. Bezop.truda  
v prom. 5 no.12:23 D '61. (MIRA 15:1)  
(Blasting)



SOIGALOV, E.V., gornyy inzh.; GOROBETS, A.K., gornyy inzh.; BOKLAN, V.G.,  
gornyy inzh.

1. Study of the processes of creation, distribution, and carrying  
out of dust subsequent to the detonation of an overhead charge.  
Gor. zhur. no.3:67-69 Nr '52. (MIRA 15L7)

1. Nauchno-issledovatel'skiy gornorudnyy institut, Krivoy Rog.  
(Krivoy Rog Basin--Mine dusts) (Blasting)

SOLGALOV, S.V., ~~name~~: ERYEBANOVSKIY, S.A., gornyy inzh.

Best removal during boring. Gor.zhur. no.12:63 D '64.

(MIRA 18:1)

1. Nauchno-issledovatel'skiy gornorudnyy institut, Krivoy Rog.

L 51998-65 EPF(n)-2/EPA(w)-2/EWT(1)/ENG(m) Pi-4/Po-4/Pz-6/Pab-10 IJP(c)

AT/WW

ACCESSION NR: AP5012045

UR/0057/65/035/005/0813/0822  
53  
52AUTHOR: Ganichev, D.A.; Fridrikhov, S.A.; Ashkinadze, B.M.; Solgan, A.B.

TITLE: Investigation of a high frequency resonant discharge in crossed fields

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 5, 1965, 813-822

TOPIC TAGS: secondary emission, resonant state, discharge plasma, microwave field, magnetic field, hydrogen 21

ABSTRACT: High frequency resonant discharge was investigated in the presence of a magnetic field because of the importance of the phenomenon for magnetrons and other high-frequency equipment and the paucity of such studies in the literature. The discharges were produced in a silver-plated oxygen-free copper rectangular waveguide section of dimensions 25.5 x 12.5 or 28.5 x 4 mm by 1  $\mu$ sec pulses of 3 cm wavelength  $H_{10}$  waves at a repetition rate of  $10^3 \text{ sec}^{-1}$ . The applied magnetic field was perpendicular to the narrow wall of the waveguide, and in the wide wall were introduced two probes (with aquadag coated electrodes to minimize secondary emission) and a hot cathode. Hydrogen was admitted to the continuously pumped waveguide section. With the uhf oscillator operating at a controlled power level (up to 200

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kW/pulse) the magnetic field was gradually increased to 6000 Oe and the probe currents, the uhf attenuation, and the luminous intensity were observed. The shape of the individual light pulses was also observed with a wide-band amplifier and an oscilloscope. In addition to the uhf intensity (electric field strength) and the magnetic field strength, the residual hydrogen pressure was varied over a wide range. Many of the results are presented graphically and are discussed in some detail. At pressures from  $5 \times 10^{-6}$  to  $5 \times 10^{-2}$  mm Hg resonant discharges with ionization of the residual gas were observed at the two values of the magnetic field for which the electron Larmor frequency was equal to the uhf frequency or to half the uhf frequency. At pressures above  $10^{-2}$  mm Hg a third resonance was observed at a Larmor frequency one-fourth the uhf frequency. These resonant discharges occurred only for uhf electric field strengths exceeding a threshold value that depended on the gas pressure. The probe current increased rapidly with increasing pressure and reached a maximum at about  $3 \times 10^{-3}$  mm Hg. "In conclusion, the authors express their gratitude to A.R.Shul'man for his interest in the work and discussion of the results." Orig. art. has: 3 formulas and 11 figures.

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L 51998-65

ACCESSION NR: AP5012045

ASSOCIATION: Leningradskiy politekhnicheskii institut im. M.I. Kalinina (Leningrad Polytechnical Institute)

SUBMITTED: 03Jul64

ENCL: 00

SUB CODE: FM, NP

NR REF SOV: 002

OTHER: 003

*BJE*  
Card 3/3

BERLIN, Meyer Abramovich; GOLGANIK, G.Ya., ved. red.

[Wear of the basic components of tubestills] Iznos osnovnykh elementov trubchatykh pechei. Moskva, Izd-vo "Meditra," 1964. 99 p. (MIRA 17:6)

ZEEVAGO, Konstantin Aleksandrovich; PORTNOY, Teodor Sinov'yevich;  
SHELODNIKOV, Bernard Markovich; SCLGANIK, G.Ya., ved. red.

[Drive for drilling rigs] Prived burovykh ustanovok. Izd.2.  
isp. i dop. Moskva, Izd-vo "Nauka," 1964. 406 p.  
(MIRA 17:7)

SOLGANIK, G.

The SVAM (glass-fiber anisotropic material). IUn. tekhn. 4 no.9:42-43  
S '59. (MIRA 12:12)

(Glass reinforced plastics)



SOLGANIK, G.

Underground bonfires. IUn.tekh. 4 no.4:13-15 Ap '60.

(MIRA 13:9)

(Coal gasification, Underground)

SOLGANIK, G.; POLYANSKIY, O.

Natural gas in the blast furnace. IUn.tekh. 4 no.8:24-25 Ag '60.  
(MIRA 13:9)

(Gas, Natural) (Blast furnaces)

CHARNYI, Isaak Abramovich; SOLGANIK, G.Ya., vedushchiy red.; VORONOV, V.V.,  
tekhn. red.

[Fundamentals of gas dynamics] Osnovy gazovoi dinamiki. Moskva,  
Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1961.  
199 p. (MLA 15:1)

(Gas dynamics)

MIKHAYLOV, Viktor Vasil'yevich, prof., doktor tekhn. nauk; SOLGANIK, G.Ya., ved. red.; GOR'KOVA, A.A., ved. red.; TROFIMOV, A.V., tekhn. red.

[Modern methods of manufacturing reinforced concrete pressure pipes] Sovremennye metody izgotovleniya naporrykh zhelezobetonnykh trub. Moskva, Gostoptekhizdat, 1962. 63 p.

(MIRA 16:1)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Mikhaylov).

(Pipe, Concrete)

GLADKIKH, Petr Andreyevich; SOLGANIK, G.Ya., ved. red.; BASHMAKOV,  
G.M., tekhn. red.

[Elimination of pressure pulsations in gas pipelines]  
Ustranenie pul'satsii davleniia v gazoprovodakh. Moskva,  
Gostoptekhzdat, 1962. 108 p. (MIRA 15:9)  
(Gas, Natural--Pipelines) (Pressure regulators)

PEKTEMIROV, Georgiy Aleksandrovich; SOLGANIK, G.Ya., ved. red.;  
FOLOSINA, A.S., tekhn. red.

[Handbook for engineers on tank farms] Spravochnik inzhenera  
neftbaz. Moskva, Gostoptekhnizdat, 1962. 326 p.  
(MIRA 15:12)

(Petroleum--Storage)

KERSHENBAUM, Yakov Markovich, prof., doktor tekhn. nauk; YUDOLOVICH,  
Mark Yakovlevich, inzh.; DANIELYAN, A.A., kand. tekhn.nauk,  
zasl. inzh. Azerbaydzhanskoy SSR, retsenzent; SOLGANIK, G.Ya.,  
ved. red.; POLOSINA, A.S., tekhn. red.

[Repair and assembly of oil-field equipment] Remont i montazh  
neftepromyslovogo oborudovaniia. Moskva, Gos.nauchno-tekhn.  
izd-vo nef.t.i gorno-toplivnoi lit-ry, 1962. 395 p.  
(MIRA 15:1)

(Oil fields—Equipment and supplies)

SHTER, B.O.; KONDHAT'YEV, N.P.; LESNIKOVA, Ye.S.; MAKAROV, I.V.;  
CHERIYSHOVA, T.Ye.; SOLGANIK, G.Ya., ved. red.; FEDOTOVA, I.G.,  
tekhn. red.

[Operation and repair of transportation and hoisting machinery  
of the petroleum and gas industry] Eksploatatsia i remont trans-  
portnykh sredstv i podzemnykh mashin neftianoi i gazovoi pro-  
myshlennosti; spravochnik. Moskva, Gostoptekhizdat, 1962. 396 p.  
(MIRA 15:7)

(Gas, Natural--Transportation) (Petroleum--Transportation)



SIDORENKO, Mikhail Vasil'yevich; SOLGANIK, G.Ya., ved.red.; YAKOVLEVA,  
Z.I., tekhn. red. ~~████████████████████~~

[Utilization of gas in Europe; technical and economic survey]  
Ispol'zovanie gaza v Evrope; tekhniko-ekonomicheskii obzor.  
Moskva, Gostoptekhizdat, 1963. 110 p. (MIRA 16:9)  
(Europe--Gas)

LEYBO, Anatoliy Nikanorovich; KHESIN, Emmanuil Borisovich; CHERNYAK,  
Yakov Solomonovich; SEVAST'YANOV, M.I.; DOVZHUK, G.T.;  
SOLGANIK, G.Ya., ved. red.; VORONOVA, V.V., tekhn. red.

[Handbook for petroleum refinery mechanics] Spravochnik me-  
khanika neftepererabatyvalushchego zavoda. Moskva, Gostop-  
tekhizdat, 1963. 801 p. (MIRA 16:7)  
(Petroleum--Refining)

ALEKSANDROV, A.M., inzh.; BAZHENOV, V.S., inzh.; BOBROVNIKOV, B.N.,  
inzh.; VAGANOV, M.P., inzh.; GUREVICH, B.M., inzh.;  
DZHIBELLI, V.S., inzh.; DROBAKH, V.T., inzh.; ISAKOVICH,  
R.Ya., kand. tekhn. nauk; KAPUSTIN, A.G., inzh.; KONENKOV,  
K.S., inzh.; MININ, A.A., kand. tekhn. nauk; PEVZNER, V.B.,  
inzh.; PESKIN, G.L., inzh.; PORTER, L.G., inzh.; PRYADILOV,  
A.N., inzh.; SLUTSKIY, L.B., inzh.; FEDOSOV, I.V., inzh.;  
FRENKEL', B.A., inzh.; TSIMBLER, Yu.A., inzh.; SHUL'GIN,  
V.Kh., inzh.; ESKIN, M.G., kand. tekhn. nauk; VOROB'YEV,  
D.T., inzh. [deceased]; SINEL'NIKOV, A.V., kand. tekhn.  
nauk; SHENDLER, Yu.I., kand. tekhn. nauk, red.; NESMELOV,  
S.V., inzh., zam. glav. red.; NOVIKOVA, M.M., ved. red.;  
RASTOVA, G.V., ved. red.; SOLGANIK, G.Ya., ved. red.;  
VORONOVA, V.V., tekhn. red.

[Automation and apparatus for controlling and regulating produc-  
tion processes in the petroleum and petroleum chemical industries]  
Avtomatizatsiia, pribory kontrolya i regulirovaniia proizvodstven-  
nykh protsessov v neftianoi i neftekhimicheskoi promyshlennosti.  
Moskva, Gostoptekhizdat. Book 3. [Control and automation of the  
processes of well drilling, recovery, transportation, and storage  
of oil and gas] Kontrol' i avtomatizatsiia protsessov bureniia  
skvazhin, dobychi, transporta i khraneniia nefti i gaza. 1963.  
551 p. (Automation) (MIRA 16:7)

(Petroleum production--Equipment and supplies)

BLANTER, Solomon Grigor'yevich; SHISHKIN, O.P., zasl. deyatel'  
nauki i tekhniki RSFSR, retsenzent; SOLGANIK, G.Ya., ved.  
red.; POLOSINA, A.S., tekhn. red.

[Industrial electronics] Promyshlennaiia elektronika. Mo-  
skva, Gostoptekhnizdat, 1963. 368 p. (MIRA 16:12)  
(Electronics)

SOROKIN, A.I., red.; ALEKSANDROV, A.V., red.; KLIMUSHIN, A.M.,  
red.; KOPYTOV, V.F., red.; TREBIN, F.A., red.;  
TURKIN, V.S., red.; CHERNYAK, L.M., red.; SOROKIN, A.I.,  
red.; ZUBAREVA, Yelena Ivanovna, ved. red.; SOLGANIK,  
Grigoriy Yakovlevich, ved. red.; POLOSINA, A.S., tekhn.red.

[Techniques used in the gas industry of foreign countries]  
Zarubezhnaia tekhnika gazovoi promyshlennosti; doklady. Mo-  
skva, Gostoptekhnizdat, 1963. 386 p. (MIRA 17:2)

1. International Gas Congress. 7th, Stockholm. 1961.

L'VOV, M.A., kand. tekhn. nauk, dots. [deceased]; SHENDLER, Yu.I.,  
kand. tekhn. nauk; NESMELOV, S.V., inzh., zam. glav. red.;  
GOR'KOVA, A.A., ved. red.; SOLGANIK, G.Ya., ved. red.;  
YAKOVLEVA, Z.I., tekhn. red.

[Automation and control apparatus for production processes  
of the petroleum and petrochemical industries] Avtomatiza-  
tsiia, pribory kontroliia i regulirovaniia proizvodstvennykh  
protsessov v neftianoi i neftekhimicheskoi promyshlennosti.  
Moskva, Izd-vo "Nedra." Book 2. [Apparatus for controlling  
pressures, consumption and amount of substance, level and  
temperature. Secondary apparatus and multiple control machines]  
Pribory kontroliia davleniia, raskhoda i kolichestva veshche-  
stva, urovnia, temperatury. Vtorichnye pribory i mashiny mno-  
zhestvennogo kontroliia. 1964. 870 p. (MIRA 17:4)

KRIKUN, Zakhar Nikitovich; KAGAN, Abram Iosifovich; SMOYTRITSKIY,  
Shmul' Moysseyevich; SOLGANIK, G.Ya., red.

[Remote control in petroleum refineries] Telemekhaniza-  
tsiia neftepererabatyvaiushchikh zavodov. Moskva, Khi-  
miya, 1964. 93 p. (MIRA 18:1)

ALEKSEYEVSKIY, Georgiy Vasil'yevich; SOLGANIK, G. Ya., vedushchiy red.;  
TROFIMOV, A.V., tekhn.red.

[Drilling rigs manufactured by the Ural Heavy Machinery Plant]  
Burovye ustanovki Uralmashzavoda. Moskva, Gos.nauchno-tekhn.  
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(Sverdlovsk--Oil well drilling rigs--Design and construction)



SOLIAN, ALEXANDRU

✓ Solian, Alexandru. Sur la notion de " $n$ -complet" dans les groupes. Acad. Repub. Pop. Romine. Bul. Şti. Secf. Şti. Mat. Fiz. 7 (1955), 255-272. (Romanian. Russian and French summaries)

Me 26  
Definitions: A group  $G$  is  $n$ -complete if  $n$ th powers of its elements form the whole group;  $n$ -quasicomplete if  $K_n(G)$ , the subgroup generated by  $n$ th powers, is the whole group;  $n$ -metacomplete if there is a chain of subgroups leading from  $G$  to the identity  $E$ , each normal in the preceding, with  $n$ -complete quotient groups. If a representative  $a_i$  of each conjugate class excluding  $E$  is expressed as a product of  $n$  factors in  $G$ ,  $a_i = b_{i1} b_{i2} \dots b_{in}$ , the elements  $t^{-1} b_{ij} b_{ij}^{-1} t$  ( $i, j = 1, \dots, n; t \in G$ ) generate an  $n$ -canonical normal subgroup. The  $n$ -metacomplete radical  $C_n$  is an  $n$ -metacomplete normal subgroup which contains all  $n$ -metacomplete normal subgroups.

Theorems: A homomorph of an  $n$ -complete group is  $n$ -complete. A homomorph of an arbitrary group is  $n$ -complete if and only if the kernel of the homomorphism contains an  $n$ -canonical normal subgroup. A necessary and sufficient condition that an abelian group  $G$  should possess a non-trivial  $n$ -complete homomorph is: the orders of the elements of  $G$  either include a number having a

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SOLIAN, ALEXANDRU

prime factor not contained in  $n$ , or include  $\infty$ , or are finite but form a set not bounded above.  $n$ -quasicomplete with abelian implies  $n$ -complete.  $K_n(G) \cup N = G$  if  $N$  is an  $n$ -canonical normal subgroup.  $n$ -metacomplete implies  $n$ -quasicomplete. Homomorphs and unions of  $n$ -metacomplete groups are  $n$ -metacomplete.  $C_n$  exists if  $G$  satisfies the maximal condition on normal chains.  $G/C_n$  contains no non-trivial  $n$ -metacomplete normal subgroup. The whole theory can be generalised on the following

lines: replace  $n$ -completeness by the property that any element  $a$  can be decomposed into  $a = x_1 x_2 \dots x_n$  where (instead of  $x_i x_{i+1}^{-1} = c$ , the identity)  $\phi_i(x_1, x_2, \dots, x_n) = c$  ( $i = 1, \dots, n-1$ ); the  $\phi$ 's here are  $n-1$  fixed but arbitrary functions of a rather general kind based on the group operation.

Analogies with the theories of abelian homomorphs of groups, metabelian solvable and nilpotent groups are suggested.

I. M. H. Etherington (Edinburgh).

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Smw

MITAN, Alexandru

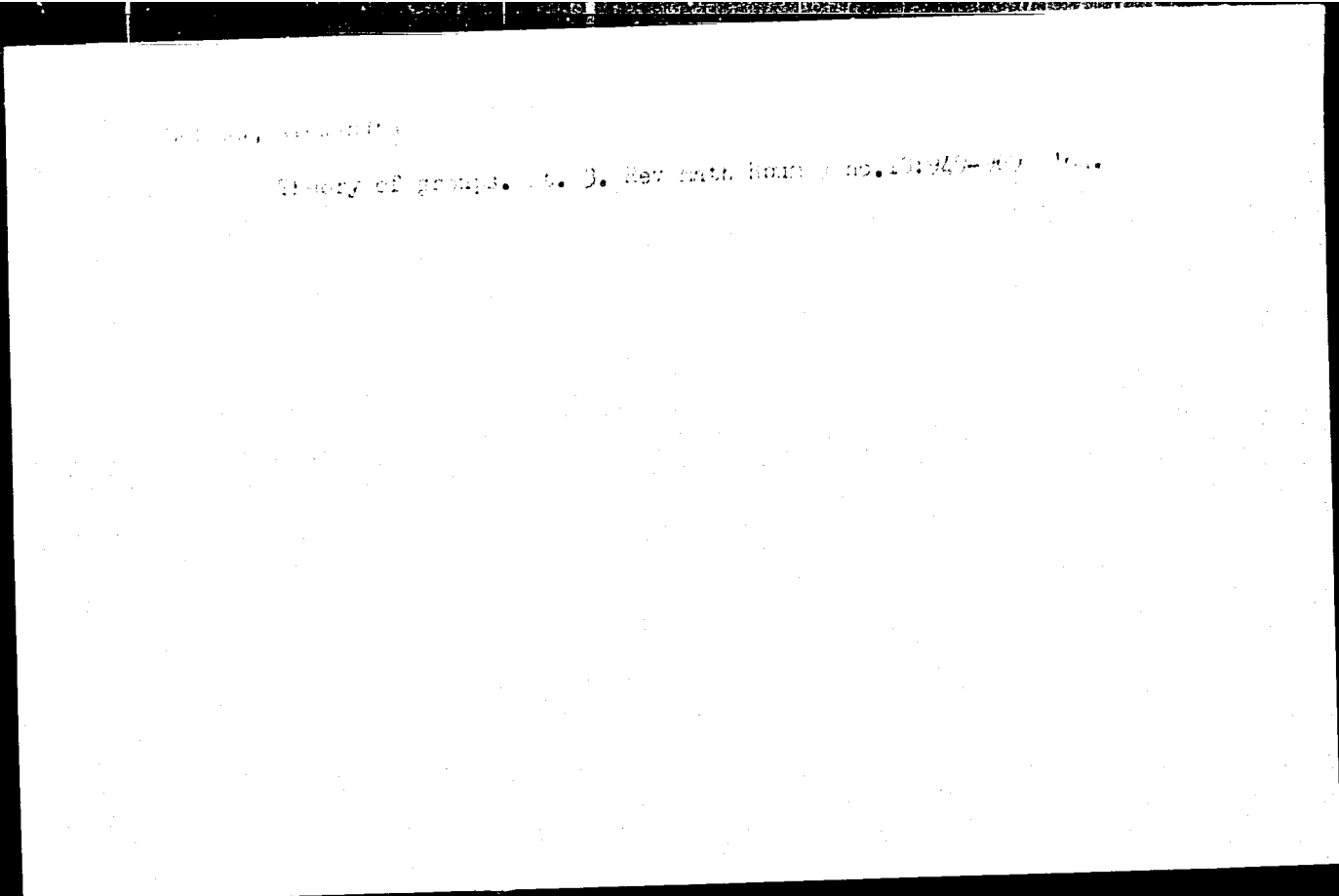
"Über die  $n$ -Vollständigkeit in Gruppen." Revue de Mathématiques Pures et Appliquées, Vol 1, No. 1, 1956.

SOLIAN, Alexandru

Compactness in the semitopology of transformation groups. *Comunicarile*  
AR 13 no.2:113-116 '63.

SOLIAN, Alexandru

Theory of transi-groups. Pt. 2. Rev math Roum 9 no.7:677-695 '64



SCILIAN, Alexandra

Theory of groups. Pt. 1. Studii cerc mat 16 no.9:1111-1127 '64.

SOLIAN, Alexandru

On the extension of transi-groups. Chekhosl mat zhurnal 15 no.1:  
30-36 '65.

1. Institute of Mathematics of the Rumanian Academy of Sciences,  
Bucharest 3, Str. M.Eminescu 47. Submitted September 29, 1963.



SOLIC, R.

Local heating of steel with natural gas, p. 179, AVARANIE, (Ministerstvo hutneho prumyslu a rudnych bani a Ministerstvo strojarstvo) Bratislava, Vol. 3, No. 6, June 1954

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

MELICHAR, M.; CHALABAIA, M.; KRAL, J.; MALY, J.; PRECECHTEL, M.; RUSEK, V.; SMECKA,  
V.; SOLICH, J.; SANDA, M.; ZACEK, H.

Working schedule for pharmacy students in 1952. Cesk. farm. 1 no.10:  
605-612 1952. (CLML 23:4)

1. Of the Department of Galenic Pharmacy of Masaryk University, Brno.

MELICHAR, M.; RUSEK, V.; SOLICH, J.

Whirl extraction as a method of preparation of some galenicals;  
2. Preparation of solutions conforming to PhBs I. Cesk. farm. 3  
no.10:336-340 Dec 54.

1. Z Ustavu galenicke farmacie farmaceuticke fakulty v Brns.  
(DRUGS, preparation of  
whirl extraction method, solutions according to PhBs I.)

SOLICH, J.

CZECHOSLOVAKIA/Chemical Technology. Chemical I-19  
Products and Their Application--Medicinals.  
Vitamins. Antibiotics.

Abs Jour: Ref Zhur-Khimiya, No 3, 1957, 9643

Author : Solich, J., Rusck, V., and Benesova, E.

Inst : Not given

Title : The Preparation of Some Galenic Compounds by the  
Method of Turbulent /Sic/ Extraction. III.  
Preparation of Infusions and Decoctions.

Orig Pub: Ceskosl. farmac., 1955, Vol 4, No 10, 512-514  
(in Czech with summaries in German, English, and  
Russian.

Abstract: Turbulent extraction was used in the preparation  
of extracts from coltsfoot leaves, ipceae roots,  
flowers of camomile, senna leaves, and valerian  
roots. The extracts were prepared in 5 min and  
satisfies all the requirements of the pharma-  
copia. The advantages of turbulent extraction

Card 1/2

SOLIKH

CZECHOSLOVAKIA / Chemical Technology. Drugs. Vitamins. H  
Antibiotics.

Abs Jour: Ref Zhur-Khimiya, No. 22, 1958, 79955.

Author : Khalabala, Maliy, Khalabaia, Kral, Kral, Solikh.  
Inst : Not given.  
Title : A study on Incompatible Substances and Substances  
Difficulty Compatible. VI. Candles with an In-  
creased Content of Ichthamol. VII. The Incompat-  
ibility of Mercurous Chloride and Accharose. VIII.  
Stability of Calcareous Solutions of Acetylsal-  
icylate.

Orig Pub: Farmacia (Ceskosl.), 1956, 25, No. 2, 43-45; No. 3,  
73-75; No. 8, 236-239.

Abstract: No abstract.

Card 1/1

12

CZECHOSLOVAKIA/Chemical Technology - Chemical Products and Their Application. Synthetic and Natural Medicinal Substances. Galenicals and Medicinal Forms. H.

Abs Jour : Ref Zhur - Kliniya, No 10, 1959, 36056

Author : Solich, J.

Inst :

Title : The Preparation of Tinctures and Decoctions. I. The Study of Certain Factors Which Effect Their Preparation According to the Czechoslovak Pharmacopeia No 2.

Orig Pub : Farmacia (Ceskosl.), 1958, 27, No 4, 99-109.

Abstract : The basic defects of tinctures (T) and decoctions (D) are their low stability and the insufficient utilization of medicinal raw materials (MRM). The author studied the qualities of T and D from Cortex chinac, Radix ipecacuanhae, Flos chamomillae, prepared according to the Czechoslovak Pharmacopeias Nos 1 and 2, GOS Ph. VIII and the Swiss Pharmacopeia. The extraction degree of

Card 1/2

H-106

CZECHOSLOVAKIA/Chemical Technology - Chemical Products and Their Application. Synthetic and Natural Medicinal Substances. Galenicals and Medicinal Forms.

Abs Jour : Ref Zhur - Kliniya, No 10, 1959, 36056.

the active agents from MRM and the time necessary for the preparation of T and D were compared. It was noted that, in the Czechoslovak Pharmacopeia No 2, the defects in the first edition were eliminated, but the preparations described in GOS Ph. VIII and the Swiss Pharmacopeia possess higher qualitative indices, conditioned by the correspondingly greater duration of the extraction period and a finer pulverization of MRM. However, even in the best of circumstances, only 80% of the active agents are extracted from MRM. To improve the quality of H and O, it is recommended to order finer pulverization of MRM and to apply to the extractions, in each case, solutions of definite acidities (extraction of alkaloids). In place of a two-stage extraction, it is necessary to apply a single one only, with a preliminary and temporary moistening of the raw material: -- T.Zvarova

Card 2/2

SOLICH, J

SURNAME, Given Names

(1)

Country: Czechoslovakia

Academic Degrees: /not given/

Affiliation: /not given/

Source: Bratislava, Farmaceuticky Obzor, Vol XXX, No 4, 1961, pp 97-103.

Data: "Pharmaceutics in the Albanian People's Republic."

Authors: SMECKA, V.

SOLICH, J.

32

GPO 981643

SOLMAN, J.

SURNAME, Given Names

(1)

Country: Czechoslovakia

Academic Degrees: [not given]

Affiliation: Chair of Pharmacy Management, Faculty of Pharmacy, UK, Universita Komenskeho;  
Comenius University (Katedra lekarskeho provozu farmaceuticke fakulty UK),

Source: Bratislava, Farmaceuticky Obzor, Vol XXX, No 6, 1961, pp 161-167.

Data: "Method of Determining the Number of Employees in the Pharmaceutical Service."

35

170 981643



SOLICH, J.  
SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees: [not given]

Affiliation:

Source: Bratislava, Farmaceuticky Obzor, Vol XXX, No 7, 1961, pp 196-224.

Data: "Categories in the Pharmaceutical Service."

Authors: KUNOVSKY, L., Faculty of Pharmacy, Comenius University (Farmaceuticka fakulta, Universita Komenskeho), Bratislava.

RYBACEK, L., presumably Faculty of Pharmacy, Comenius University, Bratislava.

SOLICH, J., presumably Kraj Institute of Public Health (Krajsky ustav narodniho zdravi), Ceske Budejovice.

STANEK, J., presumably Kraj Institute of Public Health, Ceske Budejovice.

ZAJICEK, R., presumably Center of Pharmaceutical Development (Rozvojove lekar-  
nicke stredisko) Prague.

GPO 981643

CZECHOSLOVAKIA

SDLICH, J; ~~XXXX~~ DOFKOVA, L; DUSKOVA, M; RUML, M; ~~YM~~ VONASKOVA, E.

1. Chair of Pharmaceutical Work of the Pharmaceutical Faculty UK (Katedra ~~XXXX~~ farmaceutickeho provozu Farmaceuticke fakulty ~~XXXX~~ UK), Bratislava; 2. Faculty Apothecary (Fakultni lekarna), ~~XXXX~~ Brno

Bratislava, Farmaceuticky obzor, No 5, 1963, 1p 218-226

- 4 "Thematics of Sanitation-Explanatory Work of the Druggist II.  
~~XXXX~~ Problematic of the Misuse of Drugs."

DOFKOVA, L., prom.farm., doc. PhMr.; SOLICH, J., CSc.

On the problem of drug addiction. Cesk.zdrav. 11 no.11:494-503  
N '63.

1. Farmaceuticka fakulta UK Bratislava; katedra farmaceutickeho  
provozu; fakultni lekarna v Brne.

CZECHOSLOVAKIA

J. SOLENY, Z. KOZUMANOVA, M. SANKOVA and V. VYSKOCILOVA, Chair of Practical Pharmacy - Family Pharmacy (Katedra farmaceutickeho pracovniho lekarskeho zpusobu, and Chair of Biochemistry, Microbiology and Hygiene (katedra biochemie, mikrobiologie a hygieny) Faculty of Pharmacy Comenius University, Bratislava.

"Use of Stock Solutions and Preparations in Pharmacy."

Prague, Czechoslovenska Farmacie, Vol 12, No 1, Jan 1963; pp 10-26.

Abstract (English summary modified): Review and discussion of the data obtained by 25 selected Czechoslovak pharmacies in re. use of a quantitative part to 10% of them in all, they use 56 stock solutions (3 to 40 per pharmacy) and there are many needless deviations, some obviously undesirable. Conclusion is that standardization in this area is overdue, recommend that the Czechoslovak Pharmacopoeia III, now being prepared, set standards for stock solutions and titrations. Graph, 3 tables, 18 references; 5 pharmacopoeial, 4 Czech, 1 Polish, 2 Soviet, 3 Russian.

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*Solich, J.*

SOLICH, J.; DUSKOVA, M.; RUML, M.; VONASKOVA, E.

CSOR

Dept. of Pharmaceutical Operations, Pharmaceutical faculty (Katedra  
lekaronskeho provozu Farmaceutickej fakulty) Bratislava -- Faculty Pharmacy  
(Fakultni lekarna), Brno

Bratislava, Farmaceuticky Obzor, No 3, 1963, pp 120-128

"Thematics of the Work of Teaching Health by the Pharmacist, I. The Problem of  
Propagation of Pharmacy"

(4)

SOLICH, J.; DOFKOVA, L.

Standards for supplying Czechoslovakian health services with pharmacy service. I. Hospital requirements for pharmacy services. Cesk. farm. 13 no. 6:283-291 J1'64

1. Katedra farmaceutickeho provozu farmaceuticke fakulty UK [University Komenskeho], Bratislava, a Fakultni lekarna, Brno.

SAMKOVA, M.; SOLICH, J.

On the organization of preparation of sterile drugs in the pharmacy service of the Czechoslovakian SSR. Cesk. farm. 13 no.6: 292-298 J1'64

1. Katedra farmaceutickeho provozu farmaceuticke fakulty UK [University Komenskeho], Bratislava, a Fakultni lekarna, Brno.

SOLICH, Jan, doc., PhMr, C.Sc. (Orli 8-10, Brno)

Problems of determining the need of pharmaceutical workers  
in the health service of the Czechoslovak Socialist Republic.  
Acta pharmac 8:148-187 '63.

1.Chair of Pharmaceutical Services, Faculty of Pharmaceutics,  
Komensky University, Bratislava.



SOLICH, Jan, doc. PhMr. CSc. (Brno, Or11 8-10); SAMKOVA, Milada

The problem of determining pharmacy personnel needs for the health service in Czechoslovakia. Acta pharmac 9;119-138 '64.

1. Chair of Pharmaceutical Practice of the Faculty of Pharmacy, Bratislava.

SOURCE: C.

Deception-Inductions. Pers. Form. 13 (1964):529-530. P. 164.

SCLICH, J. B. DrMSc., CSc.

Technical development in pharmacies. Cesk. zdrav. 12 no.12:  
642-644 D \* 64.

1. Katedra farmaceutického provozu farmaceutické fakulty  
Univerzity Komenského v Bratislave, a pracoviste fakultni  
lekarna, Brno.

CZECHOSLOVAKIA

JERABEK, V, KUBALCOVA, M., SOLICH, J.

1. Medical Section (Lekarske oddeleni), KUNZ, Ostrava (for ?);
2. Faculty of Pharmacy, Karlova University (Farmaceuticka fakulta UK), detas. pracoviste [?], Faculty Dispensary (fakultni lekarna), Brno (for ?).

Bratislava, Farmaceuticky obzor, No 7, July 1965, pp 313-319

"On the problematics of the increasing demands on the pharmaceutical service and the state of employee needs in the pharmaceutical service in Northern Moravia."

CZECHOSLOVAKIA

SOLICH, J.

Faculty of Pharmacy, Comenius University (Farmaceuticka fakulta  
University Komenskeho), Bratislava

Bratislava, Farmaceuticky obzor, No 11, November 1965, pp 493-495

"Cooperation between the Pharmaceutical Development Center  
(Rosvojove Lekarnicke Stredisko) and the Faculty of Pharmacy  
in Brno."

ZAJICEK, R.; MYBACEK, L.; SOLICH, J.

Estimated personnel for pharmaceutical services in general  
practice, sanatoria and spas. Cesk. farm. 14 no.3:120-127  
Mr'65.

SOLICH, J., doc. PhMr. CSc. (Brno, Orli 10); CHALABALA, M.

On various problems of the need for pharmacists in Czechoslovakia. *Cesk. farm.* 14 no.7:335-339 S '65.

1. Farmaceuticka fakulta Univerzity Komenskeho, Bratislava.

CZECHOSLOVAKIA

SOLICH, J.

No affiliation given

Bratislava, Farmaceuticky obzor, No 10 [October] 1966, p 468

"Report on the Commission for the Organization of Pharmaceutical Work  
in the Center for the Development of Pharmacy (Rozvojove Lekarnicke  
Stredisko)."



SOLICH, Otto, inz.

Method of protective pillar calculation. Unli 5 no.10:347-348  
0 '63.

1. Dul Kohinoor, Marianske Radcice.

SOLIK, J.

"Removal of foul substances from fuel and dehydration of fuel for high-pressure engines." p. 334. (MOTORYZACJA. Vol. 9, No. 11, Nov. 1954. Warszawa, Poland)

SO: Monthly List of East European Accessions. (EEAL). LC. Vol. 4, No. 4. April 1955. Uncl.

Solik; J.

✓ 1302. Standards of storage losses of petroleum products. J. Solik. *Nafta (Kiev)*, 1964, 10 (6), 133-49.—Losses are caused by evaporation and drips, as well as by handling. The theory of these is given on the basis of works of Pilat, Chernikin, Nelson, Bell, and others. Included is a table of losses worked out by a team working for the Ministry of Mines.

SOBK, J.

Standards of storage losses of petroleum products. (Conclusion)  
P. 182  
NAFTA. (Instytut Naftowy) Krakow.  
Vol. 10 no. 8, Aug. 1954

SOURCE: ELAL LC Vol. 5, no. 7, July 1956

Poland /Chemical Technology. Chemical Products  
and Their Application

I-16

Treatment of natural gases and petroleum.  
Motor fuels. Lubricants.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31976

Author : Solik Julian

Title : Evaluation of Quality of Lubricating Oils During  
Their Use

Orig Pub: Nafta (Krakow), 1955, 11, No 12, 283-284

Abstract: It is pointed out that the quality of lubricating  
oils, in particular of turbine oils, is inade-  
quately evaluated during their utilization, only  
on the basis of their acidity and degree of sapon-  
ification, and the advisability is noted of in-  
stalling in the lubricating system of a turbine

Card 1/2

Poland /Chemical Technology. Chemical Products  
and Their Application

I-16

Treatment of natural gases and petroleum.  
Motor fuels. Lubricants.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31976

an oil filter (of the Schindler type); increased pressure of the oil in this filter indicates the formation of products resulting from the aging of the oil. A formula is given for calculating the numerical index of the degree of aging of the oil, and methods are described for an analytical determination of the quantities appearing in the formula.

Card 2/2

SOLIK, Julian

At the Congress of Polish Engineers and Technicians in Breslau.  
Wiad naft 7 no.4:93-95 Ap '61. (EEAI 10:9)

(Petroleum)

SOLIK, Julian, mgr. inz.

A conference on petroleum in Budapest.  
Przepl techn no.30:7. J1 '62.



SOLIK, Julian, mgr indz.

We shall use ethyl petroleum 90. Motor ll no.43:3, ll 28 0 '62.

SS CZECHOSLOVAKIA

SOLIMAN, S.

Prace, Věstník ústředního ústavu geologického, No 4,  
1963, Pp 201-203

"Tertiary Mineralization in S&T."

SOLIN, ~~SECRET~~  
A

4

✓ Effect of pressure on the lifetime of carriers in Ge <sup>1</sup> 27  
Aryna Solin (Inst. Fizyki P.A.N., Warsaw), *Bull. acad. polon. sci. Sér. sci. math., astron. et phys.* 8, 71-5(1959) (in French).—Lifetime of carriers in diodes and transistors TC and OC70, of n Ge, was shown to be diminished by about 10% by pressure increase to 4000 atm. (Vereshchagin, et al., *C.A.* 50, 13523g) by both the Figielski differential method and that of Lederhandler and Giagoletto (*Proc. Inst. Radio Engrs.* 43, 477(1955)). J. Stecki

PT

SOLIM J.

Preparation of asymmetric sulfones. Z. Buděšinský and J. Salim. *Collection Czechoslov. Chem. Commun.* 11, 267-270 (1946) (in English). 4-AcNH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>CH<sub>3</sub> (I) (4 g., 0.8 g. NaOH, and 2.8 g. BuBr in 22 cc. EtOH, refluxed 1 hrs., and dild. with H<sub>2</sub>O) gave 2.6 g. 4-AcNH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>CH<sub>3</sub> (II), m. 105-6° (from dil. EtOH); deacetylation with dil. HCl gave 4-aminophenyl Bu sulfone (III), m. 108-10° (from 50% EtOH); HCl salt, m. 210-15°. 4-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>-Na (8.9 g.), prepd. according to the method of Brand and Casing (C.A. 7, 1722), 6.9 g. BuBr, and 50 cc. EtOH (refluxed 2 hrs.), gave 4-O<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>CH<sub>3</sub> (I), m. 102-3°; oxidation of the crude sulfide with 30% H<sub>2</sub>O<sub>2</sub> in AcOH-Ac<sub>2</sub>O gave 2 g. 4-nitrophenyl Bu sulfone, m. 56-7° (from dil. alc.), which on reduction with Fe and HCl gave II. 4-NC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>CH<sub>3</sub> (III) (3.2 g.) prepd. according to the method of Jensen and Lundquist (C.A. 35, 3967), 2.8 g. BuBr, and 0.8 g. NaOH in 11 cc. EtOH, refluxed 3 hrs., filtered, and dild. with H<sub>2</sub>O also gave II. 4-AcNH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>Na (11 g.), 11.6 g. CuH<sub>2</sub>Cl<sub>2</sub>, 40 cc. BuOH, and 20 cc. (CH<sub>3</sub>OH)<sub>2</sub>, refluxed 7 hrs., the mixt. cooled, and the product washed with H<sub>2</sub>O, gave 4-AcNH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>CH<sub>3</sub> (I), m. 105-8° (from EtOH); deacetylation with 20% HCl gave 4-aminophenyl tetradecyl sulfone (IV), m. 114-16° (from EtOH); HCl salt, m. 185-90° (decompn.). Oleyl bromide (3.3 g.) prepd. according to the method of Vesely and Chudokhlov (C.A. 24, 2428), 2.0 g. I, and 2 cc. 5 N KOH in 20 cc. EtOH, refluxed 4 hrs., filtered while

hot, the filtrate concd. to half its vol., and then dild. with H<sub>2</sub>O gave 4-AcNH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>CH<sub>3</sub> as a yellow viscous mass; deacetylation with 5 N HCl gave 4-aminophenyl dodecyl sulfone (V), m. 92° (from 90% EtOH); HCl salt, m. 192-7°. I (10 g.) and 7.1 g. 2-chloro-1,6-di-methylpyrimidine (VI) prepd. according to the method of Angerstein (Ber. 34, 3956 (1901)), refluxed with a mixt. of 10 cc. 5 N NaOH and 10 cc. EtOH 30 min., gave 13.7 g. 4-acetamidophenyl 4,6-dimethyl-2-pyrimidyl sulfone, m. 204° (decompn.); attempts to deacetylate with dil. HCl or NaOH in aq. or alc. medium gave only 2-hydroxy-4,6-dimethylpyrimidine and I. III (11.7 g.) neutralized 4,6-dimethylpyrimidine and I. III (11.7 g.) in 30 cc. with 21.7 cc. 5 N NaOH, mixed with 14.2 g. VI in 30 cc. EtOH, dild. with 70 cc. H<sub>2</sub>O, heated on the H<sub>2</sub>O bath 20 min., and the mixt. cooled and filtered gave 16.8 g. 4-aminophenyl 4,6-dimethyl-2-pyrimidyl sulfone (VII), white crystals from EtOH, m. 252° (decompn.). 4-aminophenyl 4,6-dimethyl-2-pyrimidyl sulfide (7.7 g.), prepd. according to the method of Gattermann (C.A. 7, 689), 7.1 g. VI, and 25 cc. EtOH boiled a short time and 4 cc. 5 N NaOH then added dropwise, gave 12.2 g. 4-nitrophenyl 4,6-dimethyl-2-pyrimidyl sulfide, m. 118-20°; oxidation of the sulfide with 30% H<sub>2</sub>O<sub>2</sub> in AcOH-Ac<sub>2</sub>O gave the sulfone, m. 105-7° (from EtOH), which on reduction with Fe and HCl gave VII. II, IV, V, and VII had no appreciable bacteriostatic effect against *Mycobacterium tuberculosis*. P. M. Downey