SPERANSKAYA, S.M.; ZAGUMENNYKH, V.V. (Moskva)

Activists in rural hygiene. Fel'd. i akush. no.7:35-37 Jl '54.
(MLRA 7:7)

(HYGIENE
*Russia, rural areas, sanitary activity)

SPERANSKAYA, T. A.

BULANIN, M.O.; DOLGOV, B.N.; SPERANSKAYA, T.A.; KHARITONOV, N.P.

Infrared absorption spectra of trialkylalkoxysilanes (with summary in English). Zhur. fiz. khim. 31 no.6:1321-1327 Je '57. (MIRA 10:12)

1. AN SSSR, Institut khimii silikatov, Leningrad.
(Silane--Spectra)

SPERANSKAYA, T.A.; FEDORTSOV, V.F.

Standardization of methods for measuring optical characteristics of gluing films made of polyvinyl butyral. Standartizatsiia 26 no.6:28-29 Je '62. (MIRA 15:7)

(Film (Chemistry)—Testing)

SYEMANOVA, I. A.

Nervous System

Effect of the nervous system upon the structure of muscle protein. Trudy Inst. morf. zhiv. No. 6, 1952.

Monthly List of Russian Accessions, Library of Congress November 1952. UNCLASSIFIED.

SPERANSKAYA T. A.

"Neurotrophic Action on the Skeletal Muscles During Injury." Cand Biol Sci, Inst of Animal Morphology imeni A..N. Severtsov, Moscow, 1955. (KL, No 17, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

SPERANSKAYA, T.A. (Moskva)

Some problems of neural trophism, physiology of ontogenesis and radiobiology in works of Czechoslovak scientists. Usp. sovr. biol. 50 no.3:371-374 N-D '60. (MIRA 14:3)
(CZECHOSLOVAKIA--PHYSIOLOGY--RESEARCH)

17.2400
21.6300 also 1294

S/020/60/135/005/041/043
B016/B052

AUTHORS: Korchak, L. I. and Speranskaya, T. A.

TITLE: Influence of Total X-Ray Treatment on the Content of Sulfohydryl Groups in Tissues

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 5, pp. 1254 - 1257

TEXT: The authors studied the effect of total X-ray treatment on the sulfohydryl (SH) ferments and SH groups in homogenates of the spleen, testicle, and cerebrum of mice. Publications on the susceptibility to radiation of thioferments, and the possibility of their reactivation by protective substances containing SH groups (Refs.1-20), however, are largely contradictory. The authors exposed white mice to 700 and 5000 r at a dose rate of 50 r/min, and beheaded the animals immediately or 10 min, 2, 24, 48, and 72 h after the treatment. The weakly reacting and the free SH groups were first determined by ammetric and mercurimetric titration (Refs.22,23). The free SH groups were determined by Mirskiy's method (not explained) as modified by A. S. Tsiperovich, and A. L. Loseva

Influence of Total X-Ray Treatment on the Content of Sulfohydryl Groups in Tissues

S/020/60/135/005/041/043
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(Ref.21). From the results of Table 1 the authors found that immediately after the X-ray treatment or somewhat later, no changes in the content of free and weakly reacting SH groups were determined in the tissues examined, after the application of a dose of 700 r. Although the amount of weakly reacting SH groups in spleen and testicle increased after 10 minutes, their content in control animals was the same after 2 and 24 h after irradiation. After 48 h their content increased again, and dropped to the initial value after 72 h. The weakly reacting SH groups in the testicle behaved similarly. In the cerebrum, no changes of free or weakly reacting SH groups could be found. The only difference in the effects of the dose of 5000 r and that of 700 r was that the increase in the content lasted up to 2 h after irradiation. No correlation was found between the level of the SH groups and the state of the animal during radiation sickness. The authors explain the discrepancies between their own and others' results by the conditions of their experiments. On the basis of their results they cannot explain the increase in the number of SH groups immediately after irradiation as being a primary radiation effect. They assume that this phenomenon reflects a previous change in the reactivity of SH groups. The authors have not yet finished their

Influence of Total X-Ray Treatment on the Content of Sulfohydryl Groups in Tissues

S/020/60/135/005/041/043
B016/B052

studies. There are 1 table and 23 references: 9 Soviet, 8 US, 3 German, and 1 French.

ASSOCIATION: Institut morfologii zhivotnykh im. A. N. Severtsova Akademii nauk SSSR (Institute of Animal Morphology imeni A. N. Severtsov of the Academy of Sciences USSR)

PRESENTED: June 20, 1960, by A. I. Oparin, Academician

SUBMITTED: June 17, 1960

Card 3/3

21.6300 1138 1565 1570

S/020/61/136/006/024/024
B103/B203

AUTHORS: Speranskaya, T. A. and Korchak L. I.

TITLE: Effect of total irradiation by X-rays on the reactivity of sulfhydryl groups in tissues

PERIODICAL: Doklady Akademii nauk SSSR, v. 136, no. 6, 1961, 1468-1470

TEXT: The authors studied the problem as to whether the state of the sulfhydryl (SH) groups in the tissue changes immediately after irradiation. There are nearly no published data in this respect (except for Ref. 3). To clarify this problem, the authors totally X-rayed white mice once (total dose 700 r, 50 r/min). Subsequently, the mice were immediately decapitated. The authors studied homogenates of spleen and testicles (so-called ray-sensitive tissues) as well as of the brain, and finally the blood. The reactivity of SH groups was estimated on the basis of the rate of their inactivation in the survival of the homogenate and of the blood at 37°C. For this purpose, the authors used the amperometric, mercurimetric titration by Mirsky's method (not described in the text) as modified by A.S.Tsiperovich

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Effect of total irradiation...

and A. L. Loseva. With the use of these two methods it was possible to differentiate the effect of irradiation on free and poorly reactive SH groups. The authors found that the poorly reactive SH groups of spleen and testicles undergo a change which is immediately detectable. Thus, the amount of SH groups in the homogenate on incubation in vitro at 37°C was faster reduced than in the control. The authors are unable to express any opinion on the causes and mechanism of intensified inactivation. They stress, however, that this effect was only observed in ray-sensitive organs, not in the brain or blood. Besides, there are data available according to which only poorly reactive SH groups show a radiation effect whereas the reactivity of free SH groups remains unchanged. The authors have no direct proof that a relationship exists between the increase in reactivity of SH groups and their increased concentration due to irradiation. The simultaneity of the two phenomena, as well as their occurrence only in ray-sensitive tissues and in poorly reactive SH groups, speak in favor of such a relationship. The final results in vivo and in vitro are greatly different with respect to the inactivation . Some researchers found no change in the SH group content under the influence of irradiation, others, however, speak of a reduction in

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their quantity. The authors explain this discrepancy by the use of nonuniform methods of treatment; in this case, these would be erroneous conclusions. At present, the authors cannot say anything about the biochemical, functional, or structural importance of the increase in lability of the SH groups of spleen and testicles in irradiated animals. For the time being, they regard this fact as an index of very early appearing changes. In a future paper, they want to clarify their nature and role in the formation of radiation damages. There are 2 figures and 14 references: 8 Soviet-bloc.

ASSOCIATION: Institut morfologii zhivotnykh im. A. N. Severtsova Akademii nauk SSSR (Institute of Animal Morphology imeni A.N.Severtsov of the Academy of Sciences USSR)

PRESENTED: September 17, 1960, by N. M. Sisakyan, Academician

SUBMITTED: June 27, 1960

Card 3/3

L 13584-63 EWT(1)/EWT(m)/BDS AMD/ASD/AFFTC AR/K

ACCESSION NR: AP3003864 S/0020/63/151/003/0712/0713

56
55

AUTHOR: Korchak, L. I.; Speranskaya, T. A.

TITLE: Effect of some protective substances on changes in the reactivity of sulfhydryl groups in tissues of irradiated animals 19

SOURCE: AN SSSR. Doklady*, v. 151, no. 3, 1963, 712-713

TOPIC TAGS: radioprotector, morphine, unithiol, AET, cysteamine, cystamine, tissue sulfhydryl group

ABSTRACT: The effect of radioprotectors on the reactivity of sulfhydryl groups in tissues was studied on white mice of both sexes weighing 18 to 20 g. Group I, the control groups, consisted of nonirradiated mice. The mice in group II were subjected to x-irradiation with 700 r (180 kv; 15 memp; filter, 0.5 mm Cu and 0.75 mm Al; rate, 49 r/min). The mice in group III were given single subcutaneous injections of radioprotectors: morphine, 1.5 mg; unithiol, 20 mg; AET, 10 mg; cysteamine, 3 mg; and cystamine, 5 mg. The mice were decapitated immediately after exposure and their spleens removed and ground in a glass homogenizer immersed in a water and ice mixture. The homogenate was diluted with physiological solution to 25 mg tissue per 1 ml. The reactivity of the thiol groups was determined by

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ACCESSION NR: AP3003864

changes in their content during incubation of the homogenate for 2 hr at 37C. Administration of morphine, AET, cysteamine, and cystamine prevented an increase in the reactivity of the sulfhydryl groups in the tissue; the inactivation rate of the SH groups was similar to that in nonirradiated mice (controls). Unithiol, a weak protector, had practically no effect: the inactivation rate of thiol groups in the tissue was similar to that in irradiated mice without the use of radioprotectors. The data obtained show that effective radioprotectors prevent changes in the reactivity of SH groups in radiosensitive tissues regardless of whether the protective action is due to hypoxia in the tissues (morphine) or to decreased oxygen tension in the tissues (cystamine, cysteamine, and AET). The article was presented by N. M. Sisakyan, 28 Jan 1963. Orig. art. has: 1 table.

ASSOCIATION: Institut morfologii zhivotnykh Akademii nauk SSSR im. A. N. Severtsova (Institute for Animal Morphology, Academy of Sciences SSSR)

SUBMITTED: 25Jan63 DATE ACQ: 15Aug63 ENCL: 00

SUB CODE: AM NO REF SOV: 009 OTHER: 003

Card 2/2

SPERANSKAYA, T.A.

Reduction of the toxic effect of streptomycin on the neuromuscular preparation of a cold-blooded animal. Dokl. AN SSSR 155 no. 3: 719-720 Mr '64. (MIRA 17:5)

1. Institut morfologii zhivotnykh im. A.N.Severtsova AN SSSR. Predstavleno akademikom N.M.Sisakyanom.

SPERANSKAYA, V.A.

I-14

USSR/Chemical Technology - Chemical Products and Their Application. Industrial Organic Synthesis

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 13067

Author : Farberov M.I., Speranskaya V.A.
Title : Concentration of Dilute Solutions of Formaldehyde under Pressure

Orig Pub : Zh. prokl. khimii, 1955, 28, No 2, 222-226

Abstract : Study of concentration of dilute solutions of formaldehyde (I). Determined was the dependence of composition of vapor and liquid, of the system I - water, at different pressures. With increasing pressure, the curves showing the composition of liquid and vapor are greatly deflected from the diagonal, i.e., the concentration occurs more readily. This deviation is especially pronounced on change in pressure from 2 to 4 atmospheres absolute. With increase in pressure, the content of I in the azeotropic mixture increases. Optimal pressure for concentration

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[illegible] shows the correlation between the content of I in the azeotropic mixture and the pressure. Determined was the extent of decomposition of I, depending on the duration of heating of a 22% solution of I with shavings of Cu, Al, EYa-1T steel and steel-3. [illegible] lerates substantially the decomposition of I according to the equation: $2CH_2O + H_2O \rightarrow HCOOH + CH_3OH$. Losses of I in the presence of Cu, Al and EYa-1T steel differ but slightly from losses on operation in glass vessels. The action of HCOOH cause strong corrosion of steel-3 and EYa-1t; Cu and Al are sufficient resistant to corrosion caused by dilute solutions of HCOOH.

Card 2/2

- 271 -

FARBEROV, M.I.; SPERANSKAYA, V.A.

Synthesis of β-chloro substituted alcohols and their conversions. Zhur. ob. khim. 28 no. 8:2151-2162 Ag '58. (MIRA 11:10)

1. Yaroslavskiy tekhnologicheskiy institut.
(Alcohols)

SPAERANSKAYA, V. N., SIYANITSKIY, F. M., SHUSTROV, A. K., ALEKSANDROV, P. M., KLEVANKIN, V. N., BORISKIN, M. M., LIL'P, G. M., ZIL'BERMINTS, I. V., GUDNEVA, O. A., POPOV, S. C., DENISENKO, V. K., KOROVIN, F. T., GUTSEVICH, A. V., FEREFIL'YEV, P. P., POGODINA, E. A. and FEDOROV, M. N.

"The Effectiveness of a Chemical Method for Combatting Arthropods over Large Areas from Airplanes."

Tenth Conference on Parasitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

(Leningrad - Moscow)

LAGERT, I.K., kand.biologicheskikh nauk; SPERANSKAYA, V.N., kand.biologicheskikh nauk

Effectiveness of combined freon aerosols with a bactericidal insecticide action. Voen.-med. zhur. no.8:66-68 Ag '60. (MIRA 14:7)

(INSECTICIDES) (FREONS) (AEROSOLS)

AIMAZOYEVA, V. V.; BATAYEV, P. S.; STAVROVSKAYA, V. I.; AKSEYENKO, G. R.; BEZZUBOVA, V. P.; VOROB'YEVA, Z. G.; GLADKIKH, V. F.; ZHUKOVA, L. I.; ZUYEVA, N. K.; KOROGODINA, Yu. V.; KLIMOVA, L. P.; KRYLOV, A. S.; MASLOV, A. V.; PEYKRE, A. E.; SADOVSKAYA, G. Yu.; SPERANSKAYA, V. N.; SOLOVEY, V. Ya.; TURCHINS, M. Ye.; SHAMRAY, A. F.; SHIPITSINA, N. K.; SHINKEVICH, M. A.

Field trials of new repellents. Med. paraz. i paraz. bol. no.4: 457-464 '61. (MIRA 14:12)

1. Iz entomologicheskogo otdela i otdela sinteticheskikh preparotov Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye. I. Martsinovskogo Ministerstva zdravookhraneniya SSSR (dir. - instituta - prof. P. G. Sergiyev, zav. otdelami - prof. V. N. Beklemishev i prof. V. I. Stavrovskaya)

(INSECT BAITS AND REPELLENTS)

SPERANSKAYA, V.N.

Disinfestation against fleas Ceratophyllus fasciatus and Xenopsylla cheopis under field conditions; author's abstract. Med. paraz. i paraz. bol. 34 no.1:117-118 Ja-F '65.

(MIRA 18:8)

ACHARKAN, V.A.; BARSKOV, I.M.; BIRYUKOV, I.S.; BORODINA, L.Ya.; BRENNER, M.M.; GOROLIK, B.Ye.; GUMEROV, M.N.; ZORKAYA, N.M.; IOYRISH, A.I.; KAYDALOVA, O.N.; KAPUSTIN, Ye.I.; LEBEDEVA, M.A.; LESHKOVTSEV, V.A.; LYSENKO, V.P.; MARKIN, A.B.; MIKHAYLOV, N.N.; NEST'YEV, I.V.; NECHAYEV, N.V.; NIKOL'SKIY, A.V.; OSTROUKHOV, M.Ya.; PISARZHEVSKIY, O.N.; POLUBOYARINOV, M.M.; POPOV, Yu.N.; PRASOLOV, M.A.; POKATAYEV, Yu.N.; RIMBERG, A.M.; RYABOV, V.S.; SEMKOV, B.F.; SPERANSKAYA, Ye.A.; TAKOYEV, K.F.; TRIFONOVA, O.K.; TROFIMOVA, V.I.; SHAKHNAZAROV, G.Kh.; SHKARENKOVA, G.P.; SHMERLING, K.G.; EYDEL'MAN, B.I.; MIKAELYAN, E.A., red.; MUKHIN, Yu.A., tekhn.red.

[U.S.S.R. as it is; a popular illustrated handbook] SSSR kak on est'; populiarnyi illiustrirovannyi spravochnik. Moskva, Gos.izd-vo polit. lit-ry, 1959. 462 p. (MIRA 12:2)
(Russia)

SPERANSKAYA, E. F.

Amalgam methods of separation and determination of nonferrous metals. M. T. Kozlovskii, P. P. Tsyb, and E. F. Speranskaya. *Trudy Komissii Anal. Khim., Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 4(7), 255–62(1952).—The metals were sepd. by electrolysis of their solns. with a Hg cathode and subsequent anodic oxidation of the amalgam obtained, with both processes at controlled electrode potentials. Zn was pptd. from its soln. with Na amalgam. Curves showing the dependence of cathode potential on c.d. were plotted for Cu, Bi, Sn, Cd, Zn, and Fe with the Hg cathode. For all the curves the amalgam contained 1 g.-atom of metal per l. of Hg, the electrolyte contained 0.1 g.-ion of metal and 1 g.-equiv. H_2SO_4 except for Bi when the electrolyte contained 0.0193 g.-ion Bi and 2 g.-equiv. H_2SO_4 per l. Temp. was 18–23°; r.p.m. of stirrer was 468. Curves show that Cu and Bi could be sepd. from the other metals, Sn and Cd could be sepd. from Zn and Fe, but Zn and Fe could not be sepd. Similar curves, under the same conditions, were plotted for the anodic decompn. of the amalgams. This decompn. did not occur reversibly. Decompn. of Fe began at a more pos. potential than the potential for depositing of Fe on Hg. This was explained as a result of anodic passivation of Fe. Ni and Co amalgams showed passivation at their anode decompn. Zn and Fe were sepd. by conversion to amalgams and anodic oxidation of their amalgams at a detd. potential. Fe remained in Hg. Thus an Fe-free Zn soln. was obtained from 0.04 g. Zn and 0.4 g. Fe. When the method was carried out twice on a sample, 0.02 g. Zn was sepd. quantitatively from 0.8 g. Fe. C.d. at the cathode was 0.031 amp./sq. cm., temp. 70–80°. Fe and Zn were not sepd. by shaking their soln. with Na amalgam. Al did not ppt. Zn completely from the Zn soln. By internal electrolysis with Na amalgam 0.125 g. Zn was sepd. from soln. in 1½ hrs. In alk. solns. the Zn deposit was porous and black, but addn. of plumbite (approx. 1% of amt. of Zn) gave a bright deposit. In 1 hr. (with plumbite) 0.1488 g. Zn was completely pptd. by Na amalgam upon a silvered Pt cathode. The current was 0.35 amp. at the start and 0.09 amp. at the finish. Zn could also be deposited from an alk. tartrate soln. Emilia Mayerle

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

7-13-54

SPERANSKAYA, E. F.

2428. Separation of zinc from iron by means of alkali and electrolysis with a mercury electrode. E. F. Speranskaya, P. P. Tsyb and M. T. Kozlovskii. *Zhur. Prikl. Khimii*, 1954, 27, 72–78. *Ref. Zhur., Khim.*, 1955, Abstr. No. 29,144.—The use of NaOH both in hot and cold solns. for separating Zn (0·002 to 1 g) and Fe (0·0001 to 1·5 g) gives unsatisfactory results. Anodic oxidation of an amalgam of Zn and Fe in NaOH soln. is recommended. With c.d. of 0·001 to 0·01 amp. per sq. cm in *N*, 2 *N* and 3 *N* NaOH at 50° to 80° C, Zn is almost completely transferred into soln. The decomposition potential of zinc-iron amalgam at a c.d. of 0·001 amp. per sq. cm and 50° C is 1·3 V. The amalgam in *N* NaOH is polarised anodically with a c.d. of 0·001 amp. per sq. cm at 50° to 80° C, and electrolysis is stopped when the potential for oxidation of Fe is attained. The loss of Zn from an amalgam containing 0·0090 to 0·0250 g of Zn and 0·2500 to 1·00 g of Fe is 0·0004 to 0·0014 g. The efficiency of the separation is reduced by rise in temp. (at 80° C the loss of Zn is 0·0029 g) and by increase in the concn. of Fe (with 2 g of Fe and 0·025 g of Zn the loss is 2 to 3 mg). The method is applicable to the analysis of copper-zinc ores.

G. S. Smith

SPERANSKAYA, Ye. F.

ZHURNAL ANALITICHESKOY KHIMII

Vol 11, No. 3, May-June, 1956

CEMENTATION OF SOME METALS BY ZINC AMALGAMA

E. F. Speranskaia

Kazakh State University bearing the name of S. M. Kirov

1. It has been shown the possibility of applying the amalgama of zinc for quantitative extraction of cadmium and antimony from hydrochloric, sulphatic and ammoniacal solutions, of lead from sulphatic and ammoniacal solutions, of nickel from ammoniacal solutions with subsequent formation (except for Sb) of amalgama.

2. It has been stated that at equivalent ratios of zinc in the amalgama and of copper in the solution the copper is not quantitatively extracted from the solution by the zinc amalgama owing to the formation of the chemical compounds Zn_2Cu and ZnCu. Definite jumps of potentials correspond to the formation of the indicated compounds. A quantitative extraction of copper may be effected in applying amalgama of zinc with a zinc content exceeding the copper content in the solution no less than 3 fold.

3. It has been shown that the measurement of the amalgama potentials in the cementation process makes it possible to state the presence of chemi-

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CEMENTATION OF SOME METALS BY ZINC AMALGAMA

cal compounds of the cementing metal and of the metal being cemented in the amalgama at the moment of their formation; this may be used as one of the most effective methods of amalgama investigation.

4. The action of the background concentration on the rate of the cementation process and the percent of useful zinc utilization has been found out.

2/2

LFH

)5(2)
AUTHORS: Speranskaya, Ye. F., Kozlovskiy, M. T. SOV/153-2-1-1/25

TITLE: Reduction of Selenium by Cadmium Amalgam (Vosstanovleniye selena amal'gamoy kadmiya)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 1, pp 3-9 (USSR)

ABSTRACT: In the latest publications dealing with the amalgam methods of metal separation the behavior of selenium was not taken into account. The investigation of the afore-mentioned problem is interesting from two points of view: 1) with respect to the quantitative separation of selenium from other elements; 2) with respect to its effect on the "formation of slime" (transformation of amalgam into a fine suspension which forms no drops). This article deals with the reduction of Se (IV) under various conditions. Figure 1 shows the variation in the current intensity with time during the electrolysis of an H_2SeO_3 solution on a dropping mercury electrode. The reduction was performed in a container illustrated in figure 2. Table 1 shows the cadmium-amalgam potentials in various media with regard to the usual H-electrode. These were: a) HCl; the results

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dependent on various HCl concentrations are listed in table 2; b) H_2SO_4; the results are given in table 3; c) HNO_3 (see Table 4). Figure 4 illustrates the variation in the amalgam content during the cementation. The authors proved that within the range of concentration of the acids (0.001 - 1 mol) selenium may be removed from the solution due to its production of mercury selenide. Selenium is not reduced from ammoniacal solutions. 3) The authors assumed that it is not the selenide ion but elementary selenium that constitutes the final stage in the reduction of selenium from acid solutions. Mercury selenide is produced by immediate interaction of elementary selenium with metallic mercury. 4) Further, they suppose that the occurrence of three potentiometric waves of selenium reduction is not connected with the formation of various reduction products of Se (IV) but with the inhibitory effect of the mercury-selenide film on the surface of the mercury drop. There are 4 figures, 4 tables, and 20 references, 13 of which are Soviet.

Reduction of Selenium by Cadmium Amalgam SOV/153-2-1-1/25

ASSOCIATION: Kazakhskiy gosudarstvennyy universitet im. S. M. Kirova, Kafedra analiticheskoy khimii (Kazakh State University imeni S. M. Kirov, Chair of Analytical Chemistry)

SUBMITTED: November 27, 1957

Card 3/3

85636

S/075/60/015/005/007/026/XX
B002/B056

26.1620

AUTHORS: Speranskaya, Ye. F. and Kozlovskiy, M. T.

TITLE: The Reducing Properties of Mercury

PERIODICAL: Zhurnal analiticheskoy khimii, 1960, Vol. 15, No. 5, pp. 534 - 540

TEXT: When investigating electrochemical processes in mercury or amalgam electrodes, the reducing effect of mercury is mostly neglected. This may lead to errors in the case of polarographic work. The present paper therefore investigates the reducing effect of metallic mercury in various media upon the following ions: Copper (II), iron (III), selenite, tellurite, permanganate, bichromate, molybdate, jodate, vanadate, persulfate, and arsenate. A corresponding solution together with metallic Hg was shaken in a separating funnel or in a special vessel of 50 ml capacity for 15-20 minutes, mercury was separated, and a possibly existing precipitate was, in addition, filtered off and investigated (Tables 2 and 3). The following additions were added to the solutions (Table 2): NH_4Cl, NH_4Cl+NH_4OH, $(NH_4)_2SO_4$, KSCN, KJ, NaOH.

Card 1/2

SPERANSKAYA, Ye.F.; SHEVCHENKO, Ye.S.

Reduction of tellurium (IV) by cadmium amalgam. Izv.vys.ucheb.zav.:-khim.i khim.tekh. 4 no.4:545-549 '61. (MIRA 15:1)

1 Kazakhskiy gosudarstvennyy universitet imeni S.M.Kirova, kafedra analiticheskoy khimii.
(Tellurium) (Amalgams)

SPERANSKAYA, Ye.F.

Nature of polarographic waves of certain polyvalent ions.
Zhur. anal. khim. 18 no.1:9-12 Ja '63. (MIRA 16:4)

1. Kazakh State University, Alma-Ata.
(Polarography)

SPERANSKAYA, Ye.F.

Spectrophotometric study of the reduction of sexivalent tungsten. Izv.vys.ucheb.zav.;khim. i khim.tekh. 6 no.2:195-200 '63. (MIRA 16:9)

1. Kazakhskiy gosudarstvennyy universitet imeni Kirova.
(Tungsten compounds) (Reduction, Electrolytic) (Spectrophotometry)

SPERANSKAYA, Ye.F.; KOZLOVSKIY, M.T.

Polarographic reduction of hexavalent molybdenum in fluoride-containing acid solutions. Zav.lab. 30 no.4:403-406 '64. (MIRA 17:4)

1. Kazakhskiy gosudarstvennyy universitet imeni Kirova.

POKHVALITOVA, T.G.; SPERANSKAYA, Ye.F.

Reaction of compounds of the sixth group of elements with mercury. Part 1: Molybdenum. Izv. vys. ucheb. zav.; khim. i khim. tekh. 8 no.1:11-16 '65. (MIRA 18:6)

1. Kazakhskiy gosudarstvennyy universitet imeni Kirova, kafedra analiticheskoy khimii.

SPERANSKAYA, Yu.P.; KAMBEYEVA, D.B.

Nature of polarographic waves of some polyvalent ions. Electrolysis of hexavalent tungsten solutions without superimposed external E.M.F. Zhur. fiz. khim. 39 no.8:1837-1842 Ag '65.
(MIRA 18:9)

1. Kazakhskiy gosudarstvennyy universitet.

SPERANSKAYA, Ye.F.; POKHVALITOVA, T.G.

Conditions for the formation of H_2W. Zhur.neorg.khim. 10 no.11:2393-2395 N '65. (MIRA 18:12)

1. Kazakhskiy gosudarstvennyy universitet. Submitted May 5, 1964.

ACC NR: AP7012428 SOURCE CODE: UR/0075/66/021/009/1033/1041

AUTHOR: Pokhvalitova, T. G.; Speranskaya, Ye. F. -- Speranskaya, E. F.; Nasonkina, N. M.

ORG: Kazakh State University im. S. M. Kirov, Alma-Ata (Kazakhskiy gosudarstvennyy universitet)

TITLE: Kinetics of the reactions of hexavalent chromium with metallic mercury

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 9, 1966, 1033-1041

TOPIC TAGS: chromium, mercury, chemical reduction

SUB CODE: 11,07

ABSTRACT: The kinetics of the reduction of chromium (VI) by mercury in solutions of various acids was investigated. Data are presented for hydrochloric and sulfuric acids. The solutions studied were thermostated at 20± 0.5°. In the course of reduction, the potentials of mercury and the solutions were measured by the compensation method (R-307 potentiometer). The amount of reduced chromium was determined as the difference between the amount of chromium (VI) originally presented and that remaining in the solution. The form of the chromium in solution was found by spectrophotometric analysis. Spectral characteristics of the original solutions of bi-, tri-, and hexavalent chromium were recorded in advance

UDC: 543.70

0932 1372

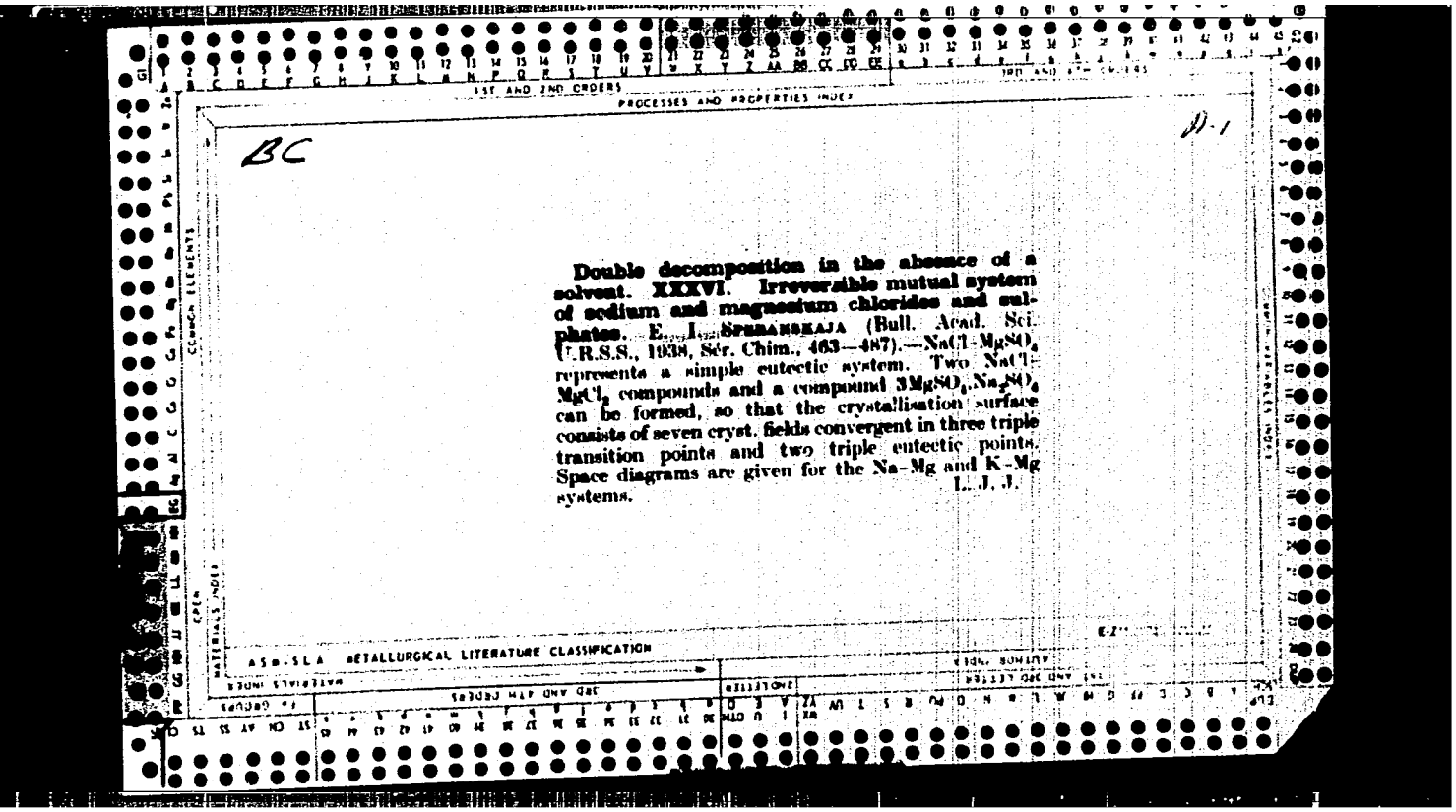
Card 1/2

ACC NR: AP7012428

under the set of conditions studied.

The absorption spectrum of hexavalent chromium is characterized by the presence of one maximum (360 nanometers, 10N HCl), the position of which is practically independent of solution dilution. Spectral characteristics of solutions of trivalent chromium contain two maxima (460 and 640 nanometers, 10N HCl), the position of which depend on the hydrochloric acid concentration. With decrease in hydrochloric acid concentration, the position of the maxima is symmetrically shifted toward the short wavelength side (420 and 600 nanometers, Orig. art. has: 6 figures, 3 formulas and 2 tables. [JPRS: 40,422]

2/2



BC

D-1

Double decomposition in the absence of a solvent. XXXVI. Irreversible mutual system of sodium and magnesium chlorides and sulphates. E. I. Sreenivasaja (Bull. Acad. Sci. U.R.S.S., 1938, Sér. Chim., 463—487).—$NaCl$-$MgSO_4$ represents a simple eutectic system. Two $NaCl$-$MgCl_2$ compounds and a compound $3MgSO_4.Na_2SO_4$ can be formed, so that the crystallisation surface consists of seven cryst. fields convergent in three triple transition points and two triple eutectic points. Space diagrams are given for the Na–Mg and K–Mg systems. L. J. J.

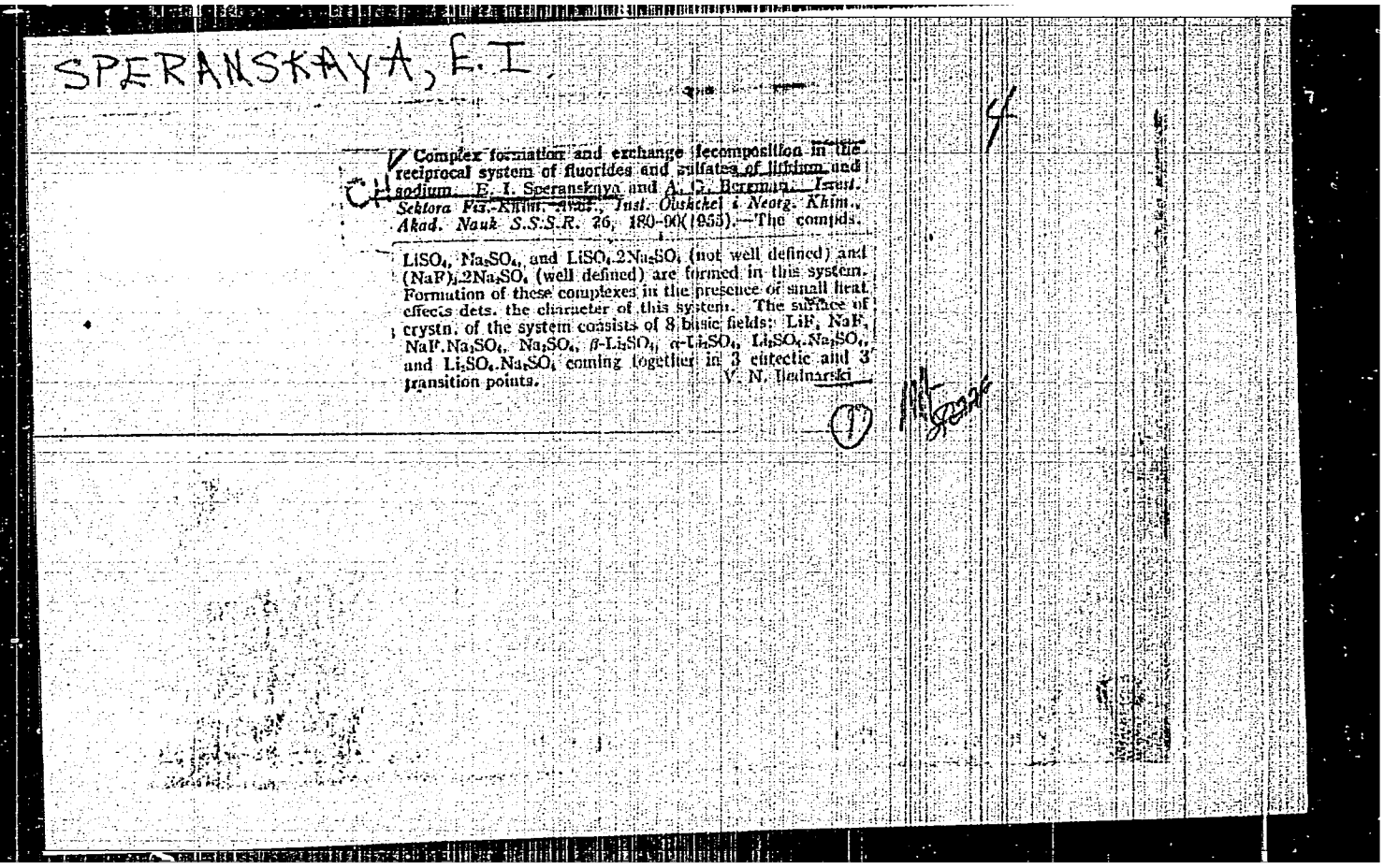
SPERANSKAYA, E. I.

"Reciprocal System of Sodium and Barium Chlorides and Nitrates," Dok. AN, 40, No. 1, 1943. Mbr., Inst. General & Inorganic Chemistry im. H. S. Kurnakov, Dept. Chem. Sci., Acad. Sci., 1943-.

SPERANSKAYA , Ye.I.

Interaction of sodium and barium nitrates and chlorides in melts and in aqueous solutions. Izv.Sekt.fiz.-khim.anal. 24:212-221'54. (MLRA 8:4)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova Akademii nauk SSSR.
(Sodium salts) (Barium salts)



SPERANSKAYA, E.I.

4

V Complex formation and exchange decomposition in the reciprocal system of fluorides and sulfates of lithium and sodium. E. I. Speranskaya and A. G. Bergman. *Issled. Sektora Fiz.-Khim. Analiz., Inst. Obshchel i Neorg. Khim., Akad. Nauk S.S.S.R.* 26, 180-90(1955).—The compds. $LiSO_4$, Na_2SO_4, and $LiSO_4.2Na_2SO_4$ (not well defined) and $(NaF)_3.2Na_2SO_4$ (well defined) are formed in this system. Formation of these complexes in the presence of small heat effects dets. the character of this system. The surface of crystn. of the system consists of 8 basic fields: LiF, NaF, $NaF.Na_2SO_4$, Na_2SO_4, β-Li_2SO_4, α-Li_2SO_4, $Li_2SO_4.Na_2SO_4$, and $Li_2SO_4.Na_2SO_4$ coming together in 3 eutectic and 3 transition points.

V. N. Ipatieff

(17)

Speranskaya, Ye. I.

USSR/Thermodynamics. Thermochemistry. Equilibria. Physico-Chemical Analysis. Phase Transitions. B-8

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26143

Author : G.G. Urazov, Ye.I. Speranskaya, Z.F. Gulyanitskaya
Title : Physico-Chemical Study of Interaction of Lead Oxide with Antimony and Tin Oxides.

Orig Pub : Zh. neorgan. khimii, 1956, 1, No 6, 1413-1417

Abstract : The system Pb - SnO_2 was studied in detail by the methods of the thermal and the x-ray phase analyses. The obtained data point out the formation of a compound of the composition Pb_2SnO_4 (I) in the solid state. The temperature of formation of I is 780°, the incongruent melting point is 1060°. The eutectic of I and PbO was found at 2.5% of SnE_2 and 850°.

Card : 1/1

URAZOV, G.G.; SPERANSKAYA, Ye.I.

Interaction of lead oxide with antimony oxides. Zhur.neorg.khim.1 no.6:1418-1429 Je '56. (MLRA 9:10)

1.Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova. (Oxides)

SOV/62-59-1-27/38

5(2)
AUTHOR: Speranskaya, Ye. I.

TITLE: The System $PbO-GeO_2$ (Sistema $PbO-GeO_2$)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 1, pp 162 - 163 (USSR)

ABSTRACT: The investigation of the system $PbO-GeO_2$ described in this short communication was carried out by differential thermal analysis. The diagram of the phase of the system $PbO-GeO_2$ was plotted according to data obtained by the heating curves of thoroughly annealed alloys. It was stated that 5 compounds are formed in the system: $PbGe_3O_7$; $PbGeO_3$; $Pb_5Ge_3O_{11}$; Pb_3GeO_5; Pb_6GeO_8 (probable composition). Compositions with 45-100% represent readily mobile and crystallizable liquids on melting. Compositions with 45-0% are viscous alloys; however, this phase is not always equilibrium. There are 3 figures and 8 references, 4 of which are Soviet.

Card 1/2

The System $PbO-GeO_2$

SOV/62-59-1-27/38

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences, USSR)

SUBMITTED: May 31, 1958

Card 2/2

5 (2)
AUTHORS: Speranskaya, Ye. I., Barskaya, I. B. SOV/62-59-8-31/42

TITLE: Germanates of Bivalent Copper

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 8, pp 1495-1496

ABSTRACT: In the present paper the investigations and collection of experimental data on systems of 2 oxides, a basic and an acid one, are continued (Refs 1-3). The system CuO-GeO_2 with the following copper contents: 15, 25, 33, 50, 66, 75% and the interrelation of phases in the systems are investigated. The reaction was carried out in a platinum crucible and the substances obtained were investigated thermally and X-ray photographically. Analysis data are compiled in tables 1 and 2. The reciprocal effect of CuO and GeO_2 began at 800°: at 1000° no further change of the system could be noticed. Coppermetagermanate $CuGeO_3$ was formed. A short description of some properties of the compound is given. There are 2 tables and 6 references, 3 of which are Soviet.

Card 1/2

Germanates of Bivalent Copper SOV/62-59-8-31/42

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov, Academy of Sciences, USSR)

SUBMITTED: February 14, 1959

Card 2/2

ROTKOVA, S.V., starshiy bibliograf; METSATUN'YAN, I.A., bibliograf; TANANAYEV, I.V., akademik, otv.red.; TRONEV, V.G., doktor khim. nauk, nauchnyy red.; SPIVAKOVA, E.M., red.; PEREL'MAN, F.M., doktor khim.nauk, nauchnyy red.; SPERANSKAYA, Ye.I., kand.khim. nauk, nauchnyy red.; DEYCHMAN, E.N., kand.khim.nauk, nauchnyy red.; BASHILOVA, N.I., mladshiy nauchn.sotrudnik, nauchnyy red.; BOL'SHAKOVA, N.K., mladshiy nauchn.sotrudnik, nauchnyy red.; KASHINA, R.S., tekhn.red.

[Chemistry of rare elements; bibliographic index of Soviet and foreign literature] Khimiia redkikh elementov; bibliograficheskii ukazatel' otechestvennoi i zarubezhnoi literatury. Moskva, Izd-vo Akad.nauk SSSR. No.1. (1951-1954). 1960. 418 p.
(MIRA 13:11)

1. Biblioteka Otdeleniya khimicheskikh nauk AN SSSR (for Rotkova).
2. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova (for Tronev, Perel'man, Speranskaya, Deychman, Bashilova, Bol'shakova).
(Bibliography--Metals, Rare and minor)

S/078/60/005/02/029/045
B004/B006

5(2)
AUTHOR: Speranskaya, Ye. I.

TITLE: Structure and Character of Lead Germanates

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 2, pp 421-432 (USSR)

ABSTRACT: It was the aim of the present paper to investigate in detail the system PbO - GeO_2 and to plot its phase diagram (Fig 1, Table 1), which has hitherto been unknown. The author based his investigation on the assumption that data of this system, which is more easily accessible to investigation, might be of considerable value for silicate chemistry. The experimental data are shown in the following diagrams and tables: figures 2-4 - heating curves of GeO_2, $PbGeO_3$, and Pb_3GeO_5; tables 2-4 - data of Debye patterns of Pb_3GeO_5, $Pb_5Ge_3O_{11}$, and $Pb_3Ge_2O_7$, figures 5-11 - heating curves of mixtures of PbO and GeO_2 of various compositions, figure 12 - heating curves of mixtures of PbO + GeO_2 and PbO + SnO_2; figure 13 - the same for PbO + TiO_2; table 5 - survey of lead silicates,

Card 1/2

Structure and Character of Lead Germanates

S/078/60/005/02/029/045
B004/B006

-germanates, -stannates, -titanates, and -zirconates, their melting points and phase transitions; table 6 - the structure of the dioxides of the group IV elements of the periodic table. The following compounds were found: $PbGeO_3$, melting point 795°, Pb_3GeO_5, melting point 738°, $Pb_5Ge_3O_{11}$, melting point 738°, a compound of the probable composition Pb_6GeO_8, melting point 745±5°, and $PbGe_3O_7$, melting point 850±7°. The author draws particular attention to the compound $Pb_5Ge_3O_{11}$, the composition of which is similar to that of barysilite, which is not formed in the system PbO - SiO_2. While data on lead polysilicates do not appear in publications, the polygermanate $PbGe_3O_7$ was found to occur in the system investigated. Polymorphism was not observed in any of the compounds investigated. There are 13 figures, 6 tables, and 21 references, 11 of which are Soviet.

SUBMITTED: November 15, 1958
Card 2/2

SPERANSKAYA, Ye.I.; BARSKAYA, I.B.

Roentgenographic and thermal investigation of alloys of the system Na_2SO_4 - $CaSO_4$. Zhur.neorg.khim. 6 no.6:1392-1396 Je '61. (MIRA 14:11)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova AN SSSR.
(Sodium sulfate) (Calcium sulfate) (Alloys)

SPERANSKAYA, Ye.I.

Reaction between lead oxide and sodium hydroxide. Zhur.neorg.khim. 6 no.8:1958-1959 Ag '61. (MIRA 14:8)
(Lead oxide) (Sodium hydroxide)

ACCESSION NR:: AP4012448 S/0078/64/009/002/0414/0421

AUTHORS: Speranskaya, Ye. I.; Arshakuni, A.A.

TITLE: Bismuth oxide--germanium dioxide system

SOURCE: Zhurnal neorg. khim., v. 9, no. 2, 1964, 414-421

TOPIC TAGS: bismuth oxide containing system, germanium dioxide containing system, phase diagram, stable phase diagram, metastable phase diagram, differential thermal analysis, x ray analysis, Bi sub 4 (GeO sub 4) sub 3, Bi sub 14 GeO sub 23, gamma form of Bi sub 2 O sub 3

ABSTRACT: The Bi_2O_3-GeO_2 system was investigated by differential thermal and x-ray analysis. Two phase diagrams--the stable and the metastable--were established for the first time for this type of system (fig. 1). The stable phase diagram shows that by reacting the alpha-quartz form (hexagonal) of GeO_2 with the beta-form (tetragonal) of Bi_2O_3, two compounds are formed with Bi_2O_3:GeO_2 ratios of 2:3 and 7:1. $Bi_4(GeO_4)_3$, melting at 1044 - 4C, is formed by an

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ACCESSION NR: AP4012448

exothermic reaction at about 790C; $Bi_{14}GeO_{23}$, melting congruently at 923 - 3C, by exothermic reaction at 882C. A eutectic mixture of GeO_2 and $Bi_4(GeO_4)_3$ crystallizes at 960C: composition 25% Bi_2O_3-75% GeO_2. A eutectic mixture of $Bi_{14}GeO_{23}$ crystallizes at 880C: 67% of Bi_2O_3 and 33% GeO_2. A eutectic mixture of $Bi_{14}GeO_{23}$ and tetragonal form of Bi_2O_3 crystallizes at 830C. The metastable phase diagram shows that reaction of the hexagonal form of GeO_2 with cubic body-centered form of Bi_2O_3 forms one compound--phase A. By extracting the fusion curve of the monotropic form of Bi_2O_3 to its ordinate, the melting temperature of the monotropic gamma form of Bi_2O_3 was determined to be 836C. "A.A. Reshchikov carried out the analysis. (X-ray analysis) was carried out with P.A. Koz'min." Orig. art. has: 3 tables and 4 figures.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry Academy of Sciences SSSR)

Card 2/5 Sub: 04 May 62

SPERANSKAYA, Ye.I.; SKORIKOV, V.M.; RODE, Ye.Ya.; TEREKHOVA, V.A.

Phase diagram of the system bismuth oxide - ferric oxide. Izv. AN SSSR. Ser. khim. no.5:905-906 '65. (MIRA 18:5)

1. Institut obshchey i neorganicheskoy khimii im. N.S.Kurnakova AN SSSR.

L 49784-65 EPF(c)/EPR/EWG(j)/EWT(m)/EWP(b)/EWP(t) Pr-4/Ps-4 IJP(c) JI
ACCESSION NR: AP5009374 UR/0363/65/001/002/0232/0235

AUTHOR: Speranskaya, Ye. I.; Rez, I. S.; Kozlova, L. V.; Skorikov, V. M.; Slavov, V. I.

TITLE: Bismuth oxide-titanium dioxide system

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 2, 1965, 232-235

TOPIC TAGS: bismuth oxide, titanium dioxide, phase diagram, phase equilibrium

ABSTRACT: The bismuth oxide-titanium oxide system was studied using thermal analysis and x-ray diffraction. The work was done in platinum or platinum-rhodium crucibles. The phase diagram is shown in fig. 1 of the Enclosure. Three compounds are formed in this system: $4Bi_2O_3 \cdot TiO_2 (Bi_8TiO_{14})$, $2Bi_2O_3 \cdot 3TiO_2 (Bi_4Ti_3O_{12})$ and $Bi_2O_3 \cdot 4TiO_2 (Bi_2Ti_4O_{11})$. All of these compounds melt in an incongruent manner: Bi_8TiO_{14} at 865°C, $Bi_4Ti_3O_{12}$ at 1210°C and $Bi_2Ti_4O_{11}$ at 1275°C. At 670°C $Bi_4Ti_3O_{12}$ undergoes a reversible phase transition. According to thermal analysis data the other two compounds undergo no conversions in the investigated temperature region.

Card 1/3

L 49784-65

ACCESSION NR: AP5009374

Bi_8TiO_{14} is produced as a result of an exothermic reaction at 830°C. At 835°C a Bi_8TiO_{14} and Bi_2O_3 eutectic mixture is crystallized, it contains 97% Bi_2O_3 and 3% TiO_2. Orig. art. has: 1 table and 3 figures.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences SSSR)

SUBMITTED: 230ct64 ENCL: 01 SUB CODE: MT

NO REF SOV: 006 OTHER: 004

Card 2/3

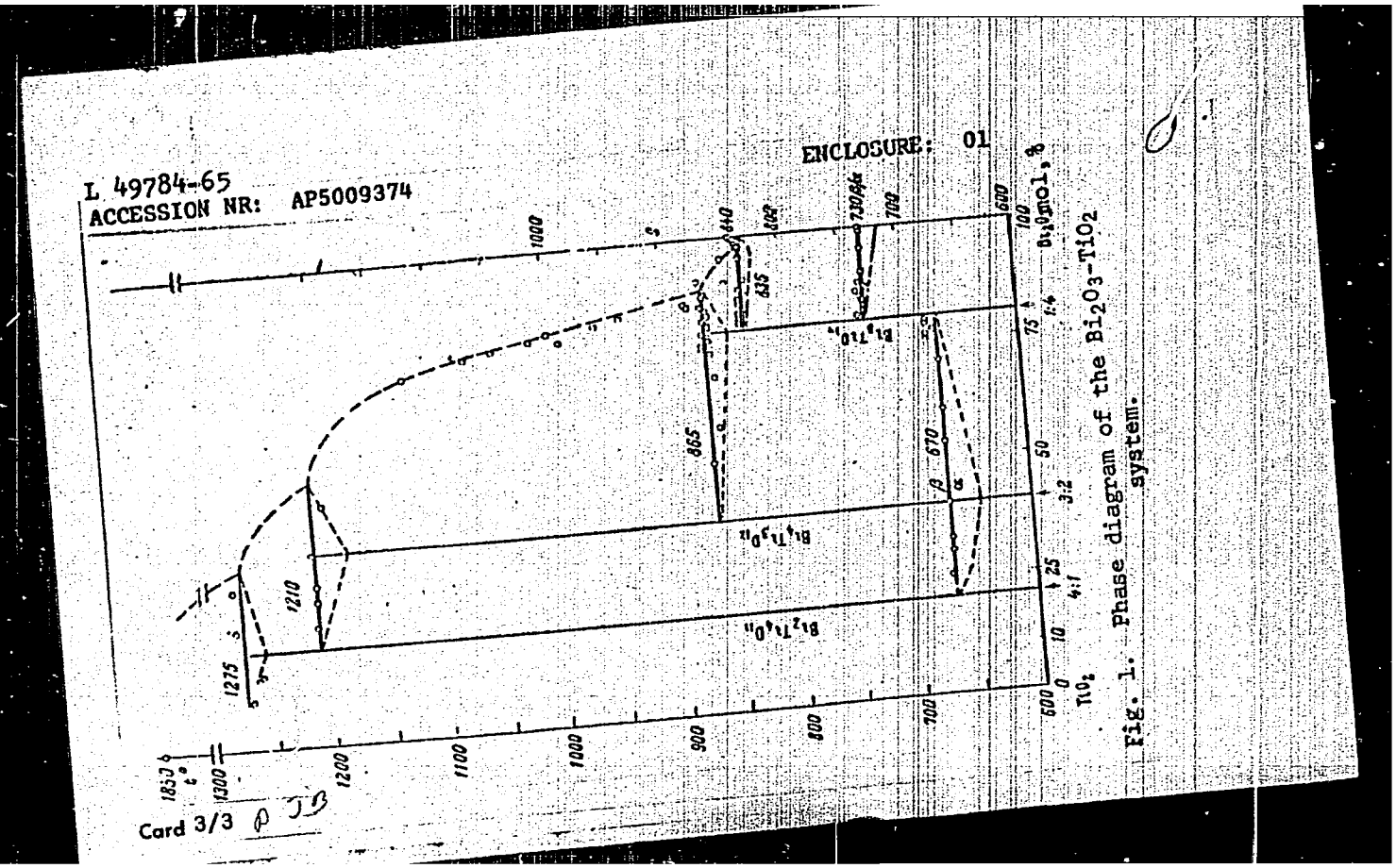


Fig. 1. Phase diagram of the Bi_2O_3-TiO_2 system.

SPERANSKAYA, Ye.M.

Pathomorphological changes in the uterine wall following cesarean section. Akush. i gin. 39 no.5:90-97 S-O '63. (MIRA 17:8)

1. Iz patomorfologicheskoy laboratorii (zav. - doktor med. nauk L.I. Chernysheva) Sverdlovskogo nauchno-issledovatel'skogo instituta okhrany materinstva i mladenchestva (dir. - kand. med. nauk R.A. Malysheva).

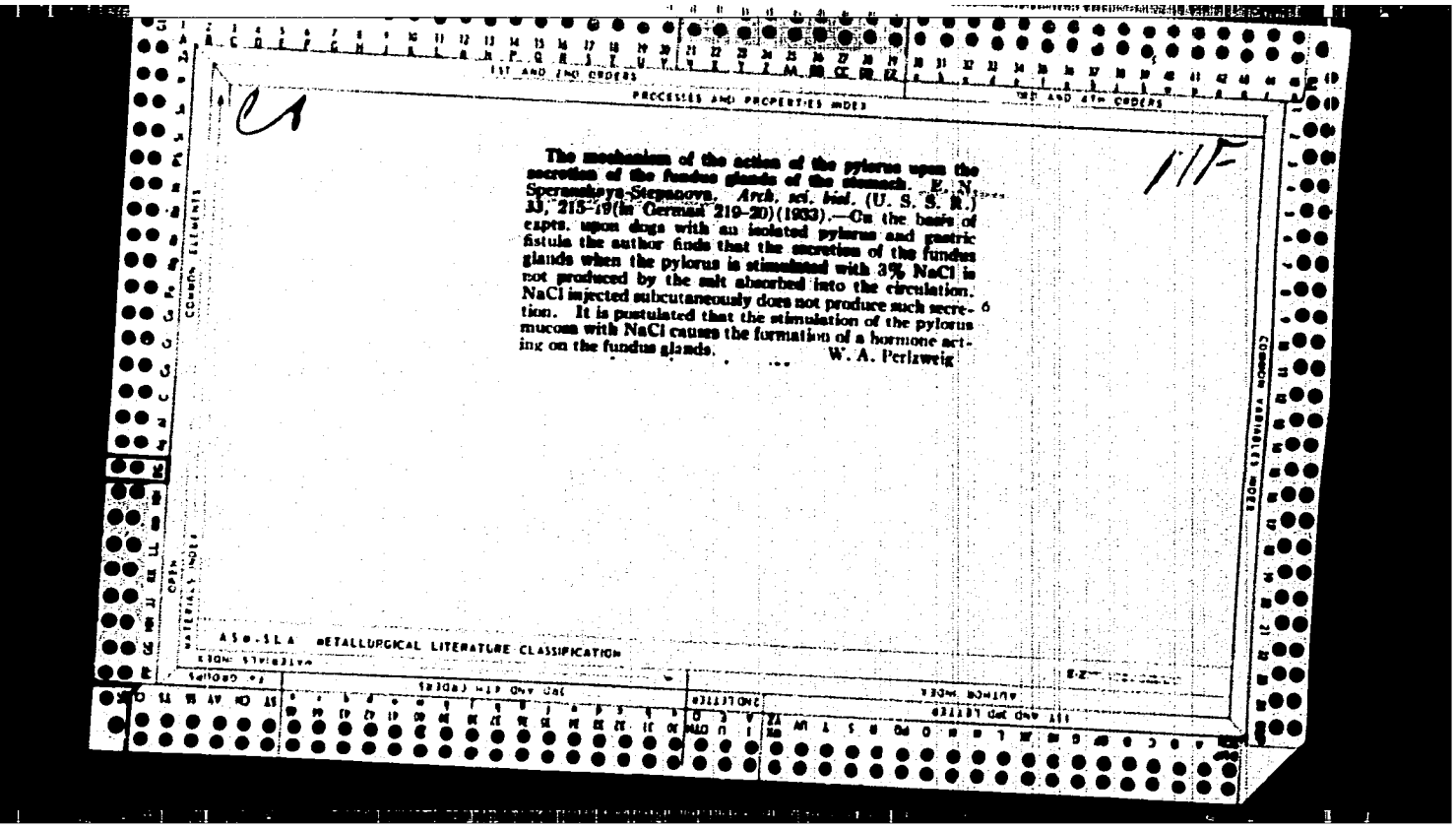
1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

The pressor action of menthol and borneol. F. N. Serbanska Stepanova and N. I. Sharaisov. *Arch. sci. biol.* (U. S. S. R.) **32**, 137-41(1932).—The expts. were performed largely on decerebrate cats. The drugs were dissolved in ether and then emulsified in saline soln. which was used for injections. Intravenous injections of borneol or of menthol caused a fall of blood pressure, while injection into an artery caused a slight rise, borneol producing a greater effect than menthol. Borneol has a toxic effect upon the nervous system. The pressor effect of camphor is much greater than that of menthol or borneol. In the presence of intoxication by borneol, camphor does not raise the blood pressure, while adrenaline still has this effect. W. A. P.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



The mechanism of the action of the pylorus upon the secretion of the fundus glands of the stomach. E. N. Speranskaya-Stepanova. *Arch. sci. biol.* (U. S. S. R.) 33, 215–19(in German 219–20)(1933).—On the basis of exptl. upon dogs with an isolated pylorus and gastric fistula the author finds that the secretion of the fundus glands when the pylorus is stimulated with 3% NaCl is not produced by the salt absorbed into the circulation. NaCl injected subcutaneously does not produce such secretion. It is postulated that the stimulation of the pylorus mucosa with NaCl causes the formation of a hormone acting on the fundus glands. W. A. Perlzweig

A50-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

Ca

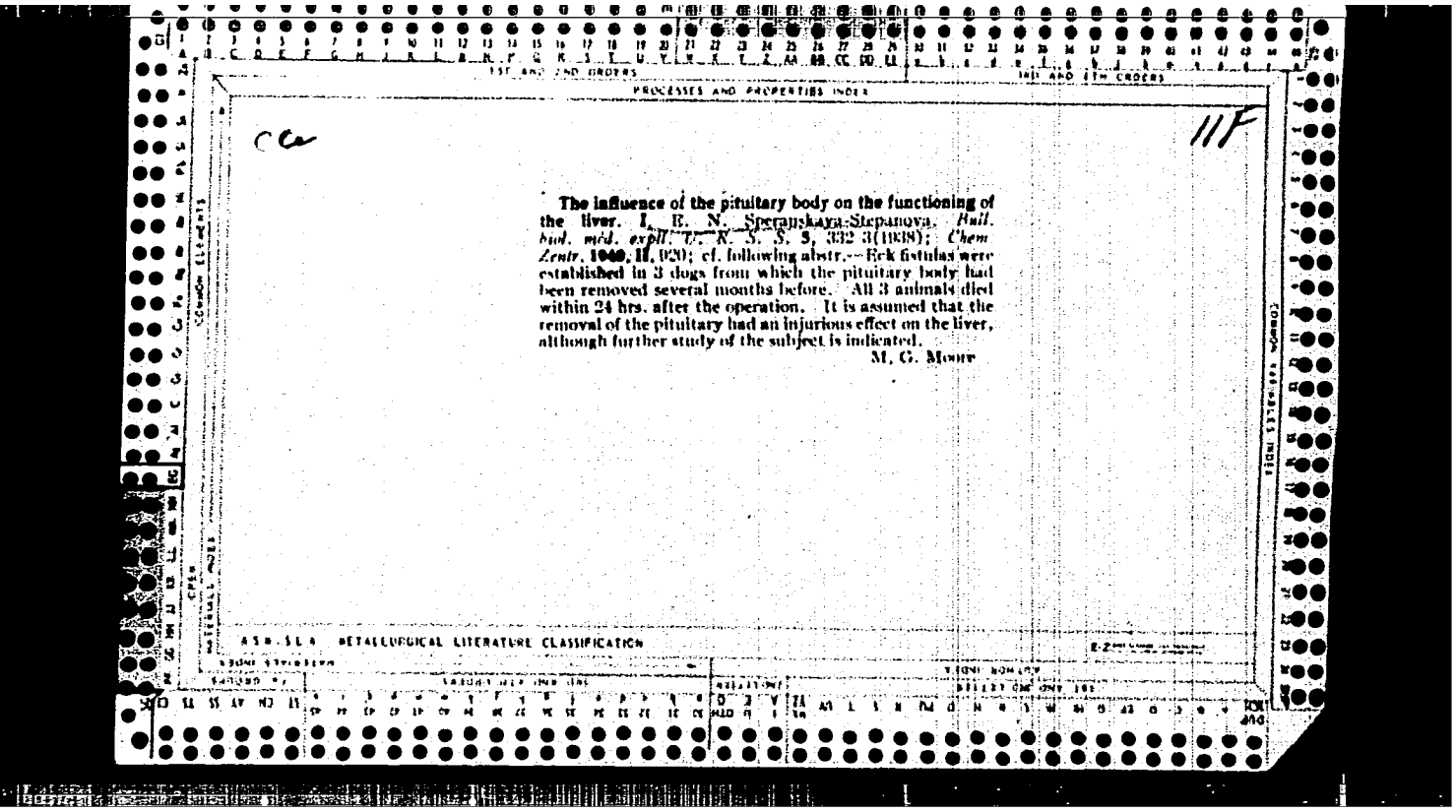
11 f

The interrelationship between the hypophysis and the parathyroid glands. R. N[illegible]-Stepanova. [illegible] sci. biol. (U. S. S. R.) [illegible]-74 (in English [illegible] 51)(1930).—"In two dogs the removal of the hypophysis did not produce a sharp fluctuation in the Ca of the blood serum, in the course of the first 4 months. The removal of the parathyroid glands from a dog without a hypophysis produces an attack of tetany in the normal period, accompanied by a characteristic decrease in the Ca content of the [illegible]. In dogs without a hypophysis the withdrawal of Ca [illegible] during the period following the removal of the parathyroid glands, notwithstanding the lengthy (25 day) diet of bread, milk-Ca salts diet (12 g. of chalk for a dog weighing 14 kg.) produces an attack of tetany within 17–20 hrs.; in normal animals, under the same conditions, the attacks occur not sooner than on the third day. The water-secreting function of the organism (diuresis) in dogs without the hypophysis is scarcely affected during parathyroprivic tetany." W. A. P.

COMMON ELEMENTS

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

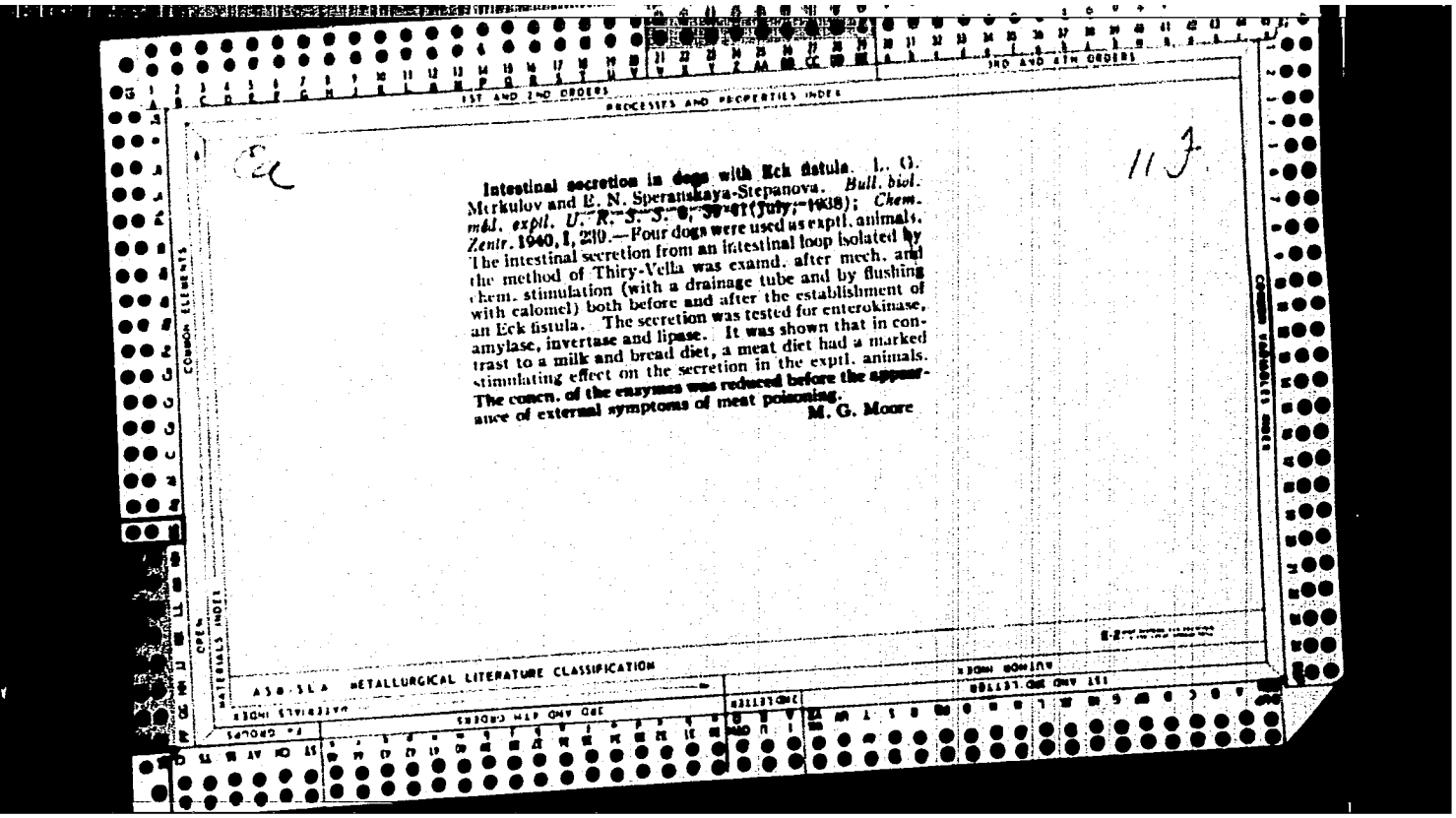
Ca

11F

The influence of the pituitary body on the functioning of the liver. I. E. N. Speranskaya-Stepanova. *Bull. biol. méd. expll. U. R. S. S.* **5**, 332-3(1938); *Chem. Zentr.* **1940**, II, 920; cf. following abstr.—Eck fistulas were established in 3 dogs from which the pituitary body had been removed several months before. All 3 animals died within 24 hrs. after the operation. It is assumed that the removal of the pituitary had an injurious effect on the liver, although further study of the subject is indicated.

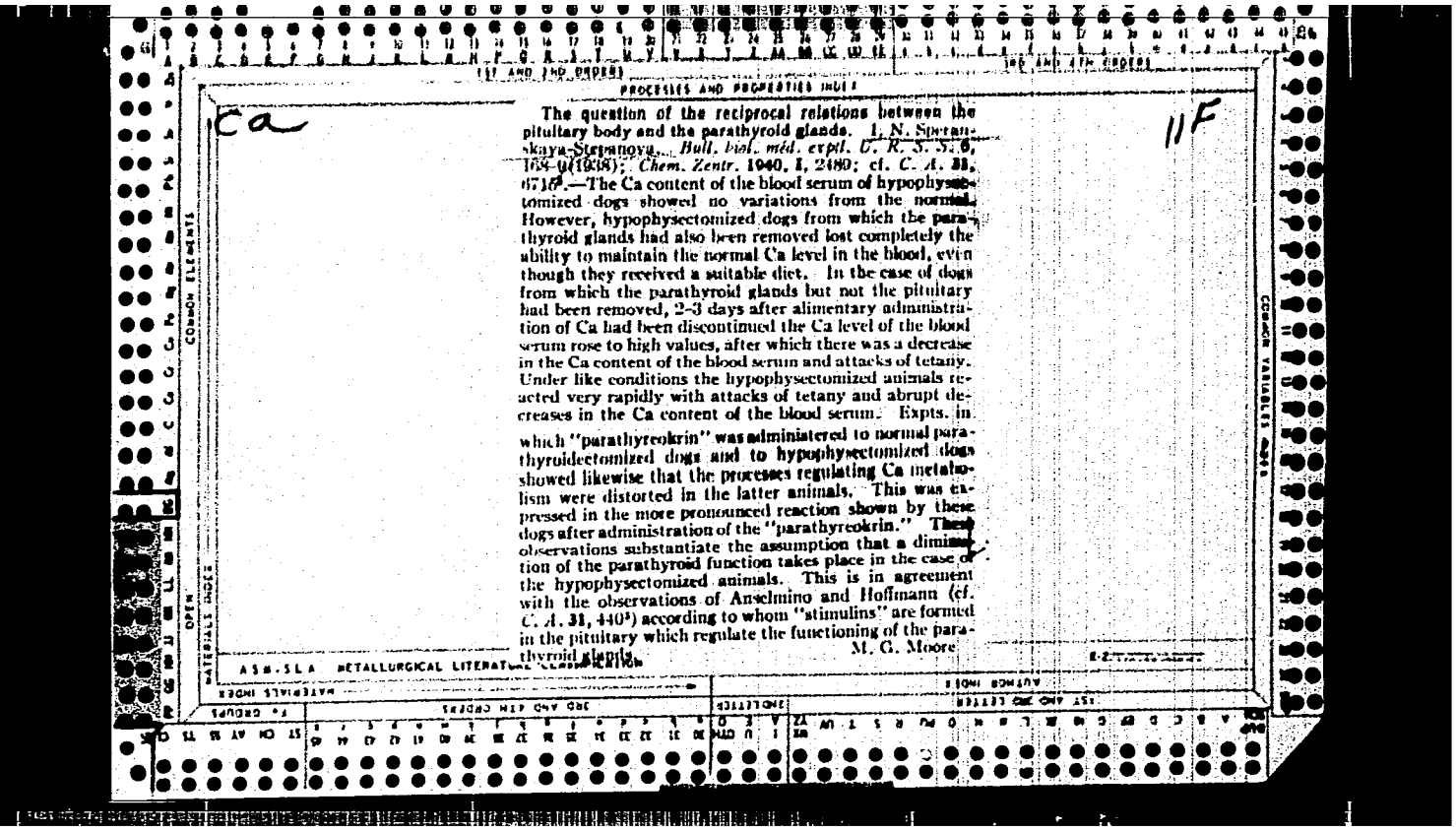
M. G. Moore

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Intestinal secretion in dogs with Eck fistula. L. G. Merkulov and E. N. Speranskaya-Stepanova. *Bull. biol. méd. expll. U. R. S. S.* 9, 39-41 (July, 1939); *Chem. Zentr.* 1940, I, 210.—Four dogs were used as expll. animals. The intestinal secretion from an intestinal loop isolated by the method of Thiry-Vella was examd. after mech. and chem. stimulation (with a drainage tube and by flushing with calomel) both before and after the establishment of an Eck fistula. The secretion was tested for enterokinase, amylase, invertase and lipase. It was shown that in contrast to a milk and bread diet, a meat diet had a marked stimulating effect on the secretion in the expll. animals. The concn. of the enzymes was reduced before the appearance of external symptoms of meat poisoning.

M. G. Moore

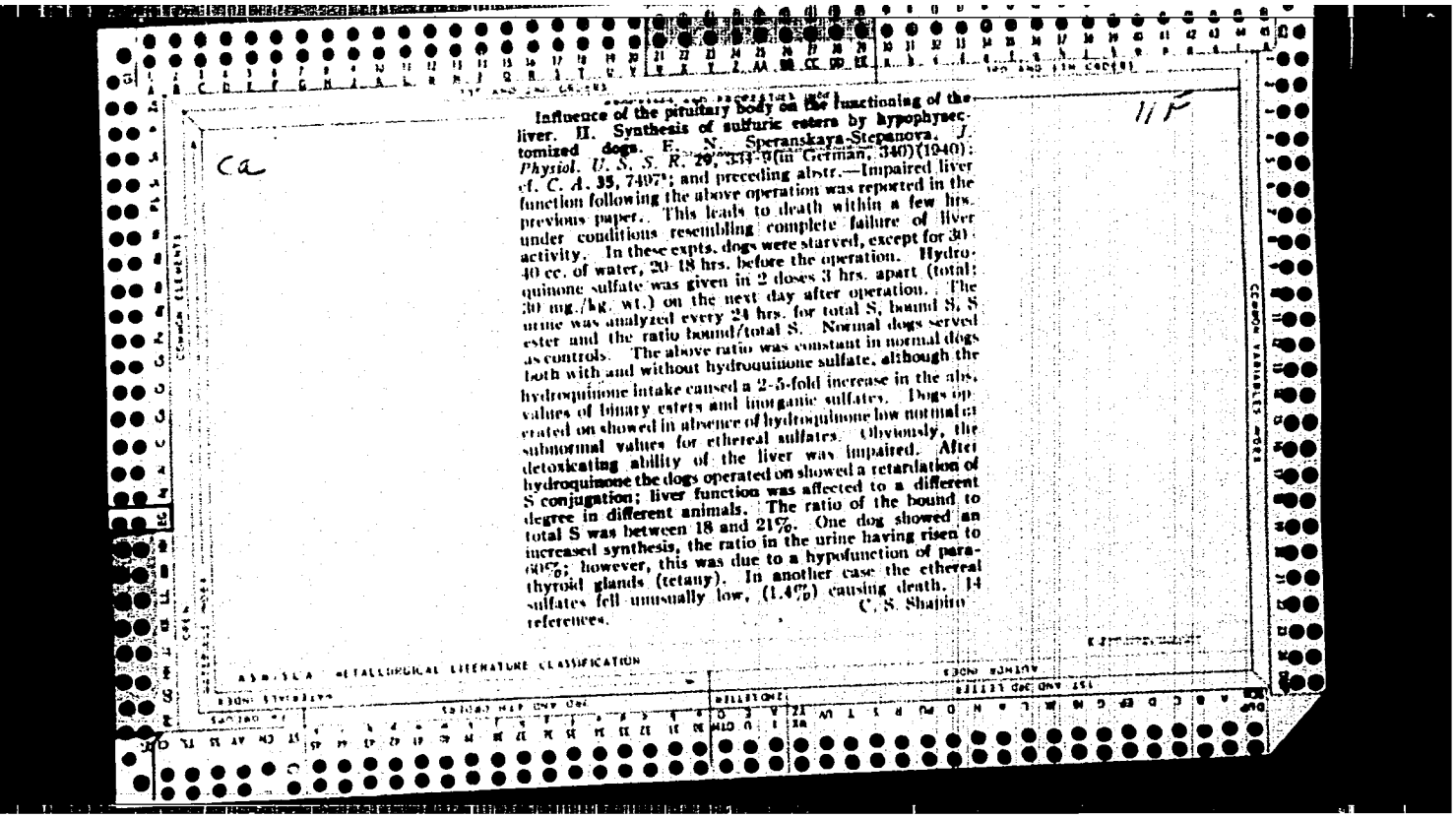


Ca

11F

The question of the reciprocal relations between the pituitary body and the parathyroid glands. I. N. Spetanskaya-Stepanova. *Bull. biol. méd. expil. U. R. S. S.* 5, 169–9(1938); *Chem. Zentr.* 1940, I, 2480; cf. *C. A.* 33, 6710.—The Ca content of the blood serum of hypophysectomized dogs showed no variations from the normal. However, hypophysectomized dogs from which the parathyroid glands had also been removed lost completely the ability to maintain the normal Ca level in the blood, even though they received a suitable diet. In the case of dogs from which the parathyroid glands but not the pituitary had been removed, 2-3 days after alimentary administration of Ca had been discontinued the Ca level of the blood serum rose to high values, after which there was a decrease in the Ca content of the blood serum and attacks of tetany. Under like conditions the hypophysectomized animals reacted very rapidly with attacks of tetany and abrupt decreases in the Ca content of the blood serum. Expts. in which "parathyreokrin" was administered to normal parathyroidectomized dogs and to hypophysectomized dogs showed likewise that the processes regulating Ca metabolism were distorted in the latter animals. This was expressed in the more pronounced reaction shown by these dogs after administration of the "parathyreokrin." These observations substantiate the assumption that a diminution of the parathyroid function takes place in the case of the hypophysectomized animals. This is in agreement with the observations of Anselmino and Hoffmann (cf. *C. A.* 31, 4403) according to whom "stimulins" are formed in the pituitary which regulate the functioning of the parathyroid glands.

M. G. Moore

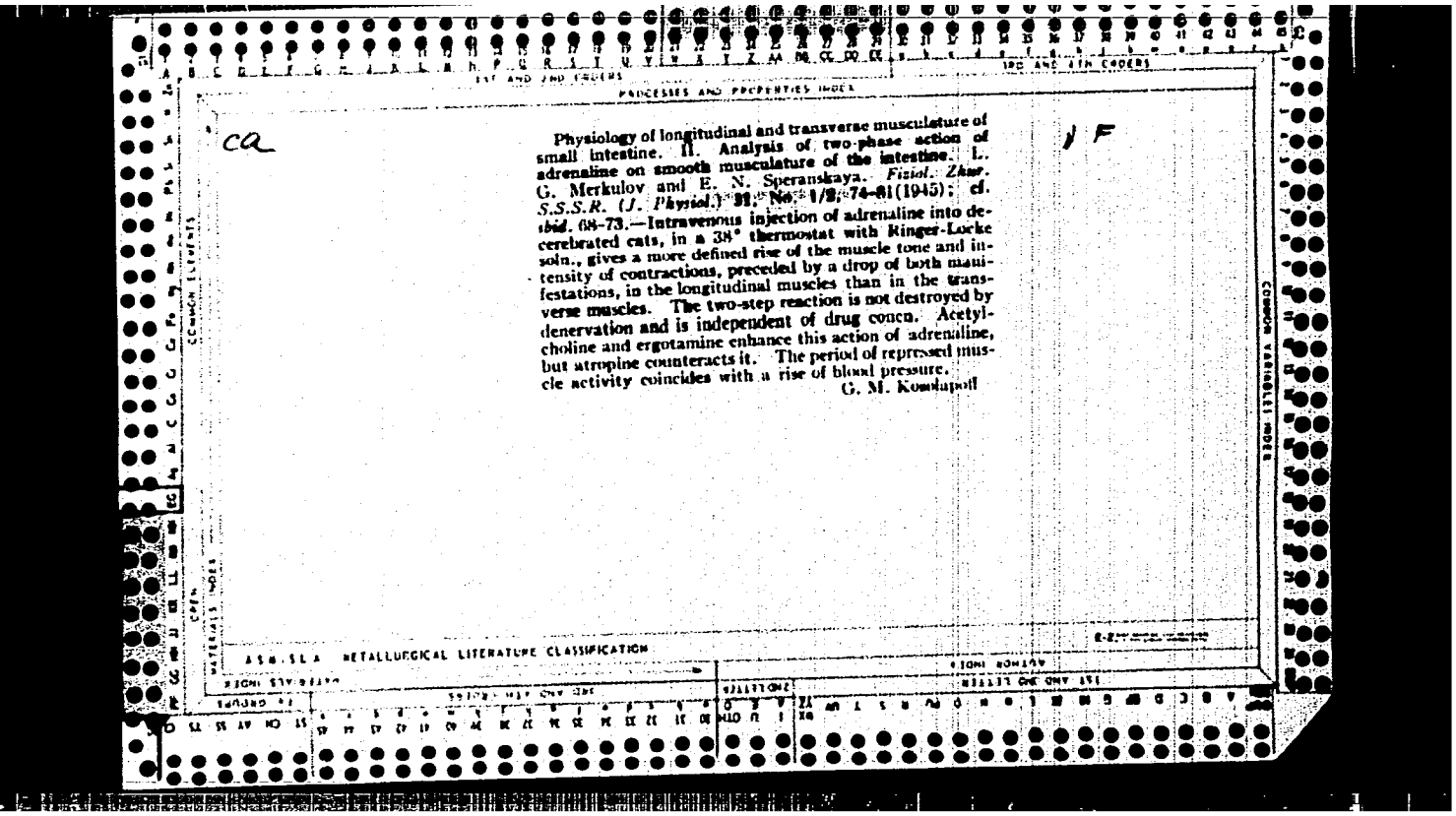


Ca

Influence of the pituitary body on the functioning of the liver. II. Synthesis of sulfuric esters by hypophysectomized dogs. E. N. Speranskaya-Stepanova. *J. Physiol. U. S. S. R.* 29, 333-9 (in German, 340)(1940); cf. *C. A.* 35, 7497⁸; and preceding abstr.—Impaired liver function following the above operation was reported in the previous paper. This leads to death within a few hrs. under conditions resembling complete failure of liver activity. In these expts. dogs were starved, except for 30-40 cc. of water, 20-18 hrs. before the operation. Hydroquinone sulfate was given in 2 doses 3 hrs. apart (total: 30 mg./kg. wt.) on the next day after operation. The urine was analyzed every 24 hrs. for total S, bound S, S ester and the ratio bound/total S. Normal dogs served as controls. The above ratio was constant in normal dogs both with and without hydroquinone sulfate, although the hydroquinone intake caused a 2-5-fold increase in the abs. values of binary esters and inorganic sulfates. Dogs operated on showed in absence of hydroquinone low normal or subnormal values for ethereal sulfates. Obviously, the detoxicating ability of the liver was impaired. After hydroquinone the dogs operated on showed a retardation of S conjugation; liver function was affected to a different degree in different animals. The ratio of the bound to total S was between 18 and 21%. One dog showed an increased synthesis, the ratio in the urine having risen to 60%; however, this was due to a hypofunction of parathyroid glands (tetany). In another case the ethereal sulfates fell unusually low, (1.4%) causing death. 14 references.

C. S. Shapiro

ASM/SLA METALLURGICAL LITERATURE CLASSIFICATION



CQ

Physiology of longitudinal and transverse musculature of small intestine. II. Analysis of two-phase action of adrenaline on smooth musculature of the intestine. L. G. Merkulov and E. N. Speranskaya. *Fiziol. Zhur. S.S.S.R. (J. Physiol.)* 31, No. 1/2, 74–81 (1945); cf. *ibid.* 68–73.—Intravenous injection of adrenaline into decerebrated cats, in a 38° thermostat with Ringer-Locke soln., gives a more defined rise of the muscle tone and intensity of contractions, preceded by a drop of both manifestations, in the longitudinal muscles than in the transverse muscles. The two-step reaction is not destroyed by denervation and is independent of drug concn. Acetylcholine and ergotamine enhance this action of adrenaline, but atropine counteracts it. The period of repressed muscle activity coincides with a rise of blood pressure.
G. M. Kondratieff

F

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SPERANSKAYA, Ye.N., prof.

Effect of the endocrine glands on the function of the autonomic nervous system. Vest. LGU 2 no.3:37-53 Mr '47.
(MIRA 12:9)

(NERVOUS SYSTEM, AUTONOMIC) (ENDOCRINE GLANDS)

SPERANSKAYA, Ye. N.

Effect of constant and alternating temperatures on the pupal development of the silkworm Antherasa pernyi G.-M. Trudy Len. ob-va est. 69 no.4:196-201 '47. (MLRA 9:3)

1. Laboratoriya entomologii Leningradskogo gosudarstvennogo universiteta, zaveduyushchiy professor B.N. Shvanvich.
(Silkworms) (Temperature--Physiological effect)

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

Influence of the intravenous introduction of glucose on the reflex stimulation of the circulatory system. N. Yu. Belenkov and E. N. Speranskaya (Acad. Med. Sci., Leningrad). *Fiziol. Zhur.* (J. Physiol.) 34, 285-91 (1948).—Intravenous introduction of glucose (10 ml. 40% soln.) into rabbits (no narcosis) or cats (brief ether narcosis, followed by decerebration) leads to temporary drop of the reflex reaction of lowering the blood pressure on stimulation of the central end of the vagus or depressor nerve. Injection of small amts. of adrenaline (2-5 ml. 10^{-6} soln.) also gave a drop of the depressor reaction. Injection of the glucose soln. always sharply increased the vigor of heart contractions and frequently increased the rhythm; blood pressure changes are small or absent. Injections of glucose followed by adrenaline, then again glucose, at 20-40-min. intervals, led to sharp drop of blood pressure and frequently to death. The lowering of the reflex response appears to be related to the change of the functional state of the nervous system caused by introduction of glucose. Reproductions of the automatic records are given. G. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SPERANSKAYA, Ye. N.

USSR/Medicine - Nervous System Nov/Dec 48
Physiology
Medicine - Hypoglycemia

"Disturbances of the Higher Nervous System Due to Induced Insulin Hypoglycemia, Report No I," V. G. Baranov, S. P. Pyshina, Ye. N. Speranskaya, Lab of Endocrinol, Inst of Experimental Med, Leningrad, 7¼ pp

"Fiziol Zhur SSSR" Vol XXXIV, No 6

Experimental data showed: (1) Pronounced, but brief hypoglycemia led to regular two-phase changes in the cerebral cortex. (2) On day of recovery from severe hypoglycemia, all conditioned reflexes disappeared but returned through two (subnormal and above normal) phases, 8-10 days in duration. (3) Analogous conditions were of shorter duration in milder hypoglycemia with corresponding periods of reduced reflex action.

61/49T47

SPERANSKAYA, Ye. N.

USSR/Medicine - Nervous System - Physiology
Medicine - Hypoglycemia

Nov/Dec 48

"Disturbances of the Higher Nervous System Due to Induced Insulin Hypoglycemia, Report No II," V. G. Baranov, S. P. Pyshina, Ye. N. Speranskaya, Lab of Endocrinol, Inst of Evolutionary Physical and Path of Higher Nervous Syst imeni Acad I. P. Pavlov, Lab of Endocrinol Inst of Experimental Med, Acad Med Sci USSR, 7½ pp

"Fiziol Zhur SSSR" Vol XXXIV, No 6

In these experiments, one or several small doses in several days produced a mild degree of hypoglycemia without external symptoms. Sugar content curves indicated the intensity of these conditions. Role of sympathetic nerve system in changes in the cerebral system due to hypoglycemia is only one link in a chain of physiological disturbances.

61/49T48

SPERANSKAYA, Ye.N.

Effect of pathological conditions on the liberation and action of mediators of the vegetative nervous system. Uch. zap. Len. un. no.99:223-237 '49. (MLRA 10:2)

1. Laboratoriya fiziologii vegetativnoy nervnoy sistemy i endokrinnykh zhelez Fiziologicheskogo instituta Leningradskogo gosudarstvennogo universiteta.
(NERVOUS SYSTEM, AUTONOMIC) (SYMPATHIN)
(ACETYLCHOLINE)

SPERANSKAYA, YE. N.

PA 165T41

USSR/Medicine - Cholinesterase, Activity 11 Mar 50
Adrenalin, Effects

"Activity of Cholinesterase of Organs and the Effect on It of the Activity of Adrenalin," Ye. N. Speranskaya, Inst of Evolutionary Physiol and Path of Higher Nervous Activity imeni I. P. Pavlov

"Dok Ak Nauk SSSR" Vol LXXI, No 2, pp 411-413

Investigates subject effect by series of tests on livers of frogs using different concentrations of adrenalin ($1 \cdot 10^{-7}$ - $1 \cdot 10^{-10}$). Finds initial level of cholinesterase activity of organs directly determines effect of adrenalin. When initial level of activity

165T41

USSR/Medicine - Cholinesterase, Activity 11 Mar 50
(Contd)

is high it is decreased under effect of adrenalin, when low it is increased. Includes table. Submitted 12 Jan 50 by Acad L. A. Orbeli.

165T41

SPERANSKAYA, E. N.

Physiologists

Vladimir Vasil'yevich Savich. Fiziol. zhur., 37, no. 6, 1951.

Monthly List of Russian Accessions, Library of Congress, April 1952. Unclassified.

SPERANSKAYA, E.N.

[Surgery of the digestive tract in chronic experiment] Metodika operatsii na pishchevaritel'nom trakte, v usloviiakh khronicheskogo eksperimenta. Moskva, Izd-vo Akademii med. nauk SSSR, 1952. 62 p. (MLRA 6:5)
(Digestive organs--Surgery)

SPERANSKAYA, Ye.N.

[Methods in operating on dogs and conducting continuing experiments in physiology] Metodiki operatsii na sobakakh i provedeniia khronicheskikh opytov v fiziologii. Moskva, Izd-vo Akademii nauk SSSR, 1953. 240 p. (MLRA 7:1)

(Vivisection) (Surgery, Experimental)

SPERANSKAVA, YE.N.

Neural regulation of biochemical processes in nerve functions (cholinesterase activity). N. P. Baranova and E. N. Speranskaya (I. P. Pavlov Inst. Physiol., Acad. Sci. U.S.S.R., Moscow). *Zhur. Obshchei Biol.* 14, 270–5 (1953).—Stimulation of sympathetic and parasympathetic liver nerve fibers, and of sympathetic nerves in skeletal muscles, does not change cholinesterase activity in adrenalectomized rats as it does in normal rats. This effect is related to the influence of adrenal cortex on acetylcholine metabolism.
Julian F. Smith

SPERANSKAYA, Ye.N., professor, zaveduyushchiy; BYKOV, K.M., akademik, direktor.

Activity of the nervous system and barrier function of the liver. Terap. arkh. 25 no.3:3-7 My-Je '53. (MLRA 6:9)

1. Laboratoriya nervnoy regulyatsii endokrinnykh funktsiy Instituta fiziologii imeni I.P.Pavlova Akademii nauk SSSR (for Speranskaya). 2. Institut fiziologii imeni I.P.Pavlova Akademii nauk SSSR (for Bykov).
(Nervous system) (Liver)

BARANOV, V.G.; SPERANSKAYA, Ye.N., professor, zaveduyushchiy; BYKOV, K.M., akademik, direktor.

Problem of classification of diseases of the thyroid gland which occur during overactivity. Terap.arkh. 25 no.3:15-17 My-Je '53. (MLRA 6:9)

1. Laboratoriya nervnoy regulyatsii endokrinnykh funktsiy Instituta fiziologii imeni I.P.Pavlova Akademii nauk SSSR (for Speranskaya and Baranov). 2. Institut fiziologii imeni I.P.Pavlova Akademii nauk SSSR (for Bykov).
(Thyroid gland--Diseases) (Nosology)

SPERANSKAYA, Ye.N.

Physiologic mechanisms of disorders of neural regulation in endocrine disorders. Trudy Inst. fiziol. 3:547-564 '54. (MLRA 8:2)

1. Laboratoriya nervnoy regulyatsii endokrinnykh funktsiy. Zaveduyushchiy Ye.N.Speranskaya.

(ENDOCRINE GLANDS, physiology,
neural regulation)
(NERVOUS SYSTEM, physiology,
regulation of endocrine glands)

Speranskaya, Ye. N.

USSR/Medicine - Physiology FD-934

Card 1/1 Pub 33-17/29

Author : Speranskaya, Ye. N.

Title : Method of establishing Eck-Pavlov's venous fistula in cats

Periodical : Fiziol. zhur. 40, 354-356, May/Jun 1954

Abstract : This article describes a surgical operation on cats whereby an artificial communication is made between the portal vein and the vena cava. Cats endure the operation well and if kept on milk and bread diet, after the operation, they can live for several months. Eck-Pavlov's fistula is of great significance in the study of the function of liver and the role it plays in physiological reactions of the organism. One Soviet reference.

Institution : Institute of Physiology imeni I. P. Pavlov, Academy of Sciences USSR, Leningrad

Submitted : June 10, 1953

SPERANSKAYA, E.N.

USSR/ Biology Physiology

Card : 1/1

Authors : Baranova, N. F., Melikhova, E. F. and Speranskaya, E. N.

Title : Disturbance of the conditional-reflex activity of dogs after application of EKK-Pavlovs' compound

Periodical : Dokl. AN SSSR, 97, Ed. 1, 181 - 184, July 1954

Abstract : Experiments were conducted on dogs to determine the effect of the application of EKK-Pavlovs' compound on the conditional reflex activities of the animals. Results are shown in graphs. Four references.

Institution : Acad. of Sc. USSR, The I. P. Pavlov Institute of Physiology

Presented by : Academician K. M. Bykov, April 12, 1954

SPERANSKAYA, E.N.

Influence of small doses of thyroidin on the higher nervous system activity in dogs. V. G. Baranov, E. N. Speranskaya, and D. S. Tendler (I. P. Pavlov Inst. Physiology, Acad. Sci. U.S.S.R., Leningrad). *Problemy Endokrinol. i Gormonoterap.* 1, No. 1, 28-33(1955).—An alteration in the conditioned reflex activity of dogs was obtained by the administration of small doses of thyroidin which did not affect the O consumption, indicating the influence of small doses of thyroidin on the nerve cells. Oxygen-consumption measurements are not always a reliable criteria of excess of thyroxine in the organism, as they do not detect the early effects of thyroxine on the nerve cells. This may have a bearing on various diseases, such as neurosis, in which no visible or measurable changes in the thyroid gland or its activity can be detected. I. A. Stekol

SPERANSKAYA, Ye. N., prof.(Leningrad)

Significance of the barrier function of the liver in neural disorders in endocrine shifts. Probl. endokr. i gorm. Moskva 1 no.3:10-16 My-Je '55. (MLRA 8:10)

1. Iz laboratorii fiziologii zhelez vnutrennoy sekretsii (zav. prof. Ye. N. Speranskaya) Instituta fiziologii imeni I.P. Pavlova (dir.-akad. K.M. Bykov) Akademii nauk SSSR.

(LIVER, metabolism,
cholinesterase, eff. of hypophysectomy)
(CHOLINESTERASE, metabolism,
liver, eff. of hypophysectomy)
(PITUITARY GLAND, effect of excision,
on liver cholinesterase)

USSR/Medicine - Pharmacology FD-2799

Card 1/2 17, 1/19

Author : Baranov, V. G.; *Speranskaya, Ye. N.; Tendler, D. S.

Title : Effect of small doses of thyroidin on the higher nervous activity of dogs.

Periodical : Byul. eksp. biol. i med. 6, 3-7, June 1955

Abstract : This article covers clinical and experimental studies of the effect of the cerebral cortex and subcortical formations on the activities of the thyroid gland, and of changes in the functional conditions of the latter on the activities of the higher division of the central nervous system. Author administered thyroidin to dogs in doses small enough not to affect the basal metabolism. Results showed that, even in small doses, thyroidin affects the activity of the cerebral cortex. This made revision of the problem of the physiological limits of the thyroid gland functions mandatory. Data obtained closely parallel those of V. G. Baranov and V. M. Dil'myan obtained from patients with hypothyreosis after use of small doses of thyroidin: decrease to normal of sharply increased cholesterin

Card 2/2 FD-2799

Abstract : content in the blood and preservation of low basel metabolis. 11 USSR references, 3 since 1940, graphs.

Institution : Laboratory of Nervous Regulation of Endocrine Function (Head*) Institute of Physiology imeni I. P. Pavlov (Dir: Academician K. M. Bykov), Academy Sciences USSR, Leningrad

Submitted : 20 Jun 1954

SPERANSKAYA, E.N.

Role of the cerebral cortex in neurohumoral regulation of the functions of the endocrine glands. Bul. stiint., sect. med. 7 no.2: 313-333 Apr-June 55

(ENDOCRINE GLANDS, physiol.
regulation by cerebral cortex)
(CEREBRAL CORTEX, physiol.
regulation of endocrine glands)

SPERANSKAYA, E.N.

"Metodyka operacji na psach i chronicznych doświadczen w fizjologii" (Operation methods on dogs and chronical experiences in physiology), by E.N. Speranska. Reported in New Books (Nowe Ksiazki), No. 15, August 1, 1955

SPERANSKAYA, Ye.N., professor

Anna Vasil'evna Tonkikh; on the 45th year of her scientific activities. Probl. endok. i gorm. 2 no.1:118-120 Ja-F '56. (MLRA 9:10)

(TONKIKH, ANNA VASIL'EVNA, 1886-)

SPERANSKAYA, Ye.N.

Methodology of studying the physiology and pathology of the endocrine glands. Fiziol.zhur. 42 no.5:418-424 My '56. (MLRA 9:11)

1. Laboratoriya fiziologii zheloz vnutrennoy sekretsii Instituta fiziologii im. I.P.Pavlova AN SSSR, Leningrad.
(ENDOCRINE GLANDS
pathol. & physiol., study method, review)

SUBJECT: USSR/Medicine 25-5-9/35

AUTHOR: Speranskaya, Ye.N., Doctor of Medical Sciences, Professor (Leningrad)

TITLE: The Nervous System and the Endocrine Glands (Nervnaya sistema i endokrinnyye zhelezy)

PERIODICAL: Nauka i Zhizn' - May 1957, No 5, pp 21-23 (USSR)

ABSTRACT: Man and animal die if their body organs fail to adapt themselves to the changes in their surroundings. Two physiological processes, though differing from one another, are closely related: the functional alterations in the organism due to the constant external changes and the effort of the organism to regain its former condition, i.e. its "physiological equilibrium". This is possible by the reflexes of the nervous system and the irritation of the interoreceptors, sensitive apparatus located in all organs and tissues inside the whole body. The main regulator of all bodily functions is the nervous system, which controls the organs of inner secretion. Various kinds of glands produce biologically very active substances - hormones, which directly get into the blood and lymph and in this way into the whole body. If one of the endocrine glands is disturbed, the functions of the

Card 1/2

USSR/Human and Animal Physiology - The Nervous System. T

Abs Jour : Ref Zhur Biol., No 3, 1959, 13157

Author : Speranskaya, Ye.N.

Inst : Institute of Physiology AS USSR

Title : Influence of Passive Motions on Reflex Contractions of Muscles of Contralateral Extremity

Orig Pub : Tr. In-ta fiziol. AN SSSR, 1957, 6, 114-122

Abstract : In decerebrated cats passive flexion of the posterior leg at the knee joint usually inhibited contraction of the semitendinosus of the other leg with irritation of the cutaneous nerve; sometimes contraction, on the other hand, was reinforced. Passive extension of the leg at the knee joint more often strengthened the contraction of the semitendinosus and rarely inhibited it. The direction of the reflex reaction depended on the

Card 1/2

SPERANSKAYA, Ye. M.

Method of transplantation of the mouth of the pancreato-duodenal vein into inferior vena cava. Fiziol. zhur. 43 no.2:185-187 F '57 (MLRA 10:4)

1. Laboratoriya fiziologii zhelez vnutrennoy sekretsii Instituta fiziologii im. I.P. Pavlova AN SSSR, Leningrad.

(VENA CAVA, surg.
transpl. of pancreato-duodenal vein into inferior vena cava in dogs, method)
(PANCREAS, blood supply
same)
(DUODENUM, blood supply
same)

SPERANSKAYA, Ye.N.

Phenomenon of compensation of the organism and of the endocrine glands. Fiziol.zhur. 43 no.7:691-698 Jl '57. (MIRA 10:10)

1. Laboratoriya fiziologii zhelez vnutrenney sekretsii Instituta fiziologii im. I.P.Pavlova AN SSSR, Leningrad.
(ENDOCRINE GLANDS, physiology,
compensation (Rus))

"The Role of Glands of Internal Secretion in the Processes of Compensation of Function of the Organism."

Theses of the Proceedings of the Annual Scientific Sessions 23-26 March 1959 (All-Union Institute of Experimental Endocrinology)

From the Institute of Physiology imeni I. P. Pavlov of the Academy of Sciences USSR (Director--Academician K. M. Bykov)

SPERANSKAYA, Ye.N., prof., obshchiy red.; NATAROVA, N.V., red.izd-va; VASIL'YEVA, Z.A., red.izd-va; ZENDEL', M.Ye., tekhn.red.

[Transactions of the Conference on Problems of the Role of Neurohumoral and Endocrine Factors in the Activity of the Nervous System in Normal and in Pathological Conditions] Trudy Soveshchaniia po voprosam roli neiro-gumoral'nykh i endokrinnykh faktorov v deiatel'nosti nervnoi sistemy v norme i patologii. Pod obshchei red. E.N.Speranskoi. Moskva, Izd-vo Akad.nauk SSSR, 1959. 247 p. (MIRA 12:9)

1. Soveshchaniye po voprosam roli neyro-gumoral'nykh i endokrinnykh faktorov v deyatel'nosti nervnoy sistemy v norme i patologii, 1956.
2. Laboratoriya fiziologii zhelez vnutrenney sekretsii Instituta fiziologii im. I.P.Pavlova AN SSSR (Leningrad) (for Speranskaya).
(NERVOUS SYSTEM) (ENDOCRINE GLANDS)

SPERANSKAYA, Ye.N. (Leningrad)

What should be considered a physiologically normal thyroid gland? Thoughts of a physiologist. Probl.endok.i gorm. 5 no.5:122-123 S-O '59. (MIRA 13:5)

1. Chlen-korrespondent AMN SSSR.
(THYROID GLAND physiol.)