

Structure of Monomeric Arseno Compounds

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B011/B117

structure should be colorless. The authors presume that the difference between above-mentioned results could be explained with reference to the instability of the arsenobenzene. Its resinification (polymerization) products are most readily oxidized in air up to C_6H_5AsO . The latter as well as the resinification products of arsenobenzene are very readily soluble in many solvents, but are difficult to detect whereby unreliable results for the molecular weight of arsenobenzene are obtained. The authors arrived at the conclusion that reliable data on the structure of arsenobenzene can be obtained only when the X-ray structural analysis method is used. The thin, almost colorless (yellowish) crystals of arsenobenzene form thin needles. Axis b is the longer one. The simpler shapes are pinacoids $\{100\}$ and $\{001\}$. From data obtained, the authors came to the conclusion that there are 3 crystallographically non-equivalent As atoms contained in a cell. As is proved by the established projection of the electron density (Fig 1), the arsenobenzene molecule is a cyclic system consisting of As atoms. One phenyl group is bound to each As atom. The cycle is six-membered (IV). Such cyclic molecules occupy the position of centers of symmetry within the crystal. The cycle is not arranged in one plane, but has a chair-shaped configuration and a valence angle As - As - As of 93° . The outer valence angles As - As - C are

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Structure of Monomeric Arseno Compounds

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99 ± 3°. The lengths of the bonds As - As are 2.44 Å, and that of the bonds C - As = 1.96 Å. Provided that data for arsenobenzene given by Blicke and Smith are correct, then their data on the molecular weights of p-arsenotoluene and p-arsenoanisole are also reliable. Hence, the authors come to the conclusion that there are no arseno compounds with a structure R - As=AS - R at all. They actually are either polymers (I) and (II) or cyclic compounds (III) and (IV). There are 1 figure and 10 references, 3 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im. S. Ordzhonikidze (All-Union Chemicopharmaceutical Scientific Research Institute imeni S. Ordzhonikidze). Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences, USSR)

PRESENTED: October 12, 1959, by A.N. Nesmeyanov, Academician

SUBMITTED: October 6, 1959

Card 3/3

STREL'TSOVA, I.N.; STRUCHKOV, Yu.T.

Steric hindrance and conformation of molecules. Report No.4:
Crystal structure of tetrabromo-*m*-xylene and tetrabromo-*o*-xylene.
Izv. AN SSSR. Otd. khim. nauk no.2:250-259 F '61. (MIRA 14:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR,
(Xylene—Spectra)

STREL'TSOVA, I.N.; STRUCHKOV, Yu.T.

Steric hindrance and molecule conformation. Report No. 5: Crystalline structure of hexachlorobenzene. Zhur.strukt.khim. 2 no.3:312-326
My-Je '61. (MIRA 15:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Benzene) (Crystallography)

STREL'TSOVA, L.I.; SHISTER, G.M., red.

[Investigating storm sewer inlets of combined sewerage systems;
scientific report] Issledovanie livnespuskov obshchesplavnoi
kanalizatsii; nauchnoe soobshchenie. Leningrad, Akad.kommun.
khoz.im. K.D.Pamfilova, 1959. 50 p. (MIRA 13:10)
(Sewerage)

IMYANITOV, I.M.; MIKHAYLOVSKAYA, V.V.; ZIGANOV, N.P.; STREL'TSOVA, M.B.

Instrument for prolonged measurement of the intensity of an
atmospheric electrical field in complex meteorological
conditions. Izv.AN SSSR. Ser.geofiz. no.9:1121-1127 S '56.
(MLRA 9:12)

1. Glavnaya geofizicheskaya observatoriya imeni A.I. Voeykova.
(Atmospheric electricity)

GENDZELEVSKAYA, V.S.; STREL'TSOVA, M.T.

Standardization of knitted fabrics. Standartizatsiia 25
no.8:34-35 Ag '61. (MIRA 14:7)
(Knit goods--Standards)

LIBERMAN, Ye.A.; STREL'TSOVA, N.I.

Certain peculiarities of pupillary component of orientation reaction
in man. Zh. vysshei nerv. deiat. 2 no. 6:886-893 Nov-Dec 1952.
(GLML 24:1)

1. Department of Psychiatry of Khar'kov Medical Institute and of the
Ukrainian Psychoneurological Institute.

STREL'TSOVA, N.I.

MEL'KUMOVA, A.S.; STREL'TSOVA, N.I.

Data on the pathogenesis and pathogenic therapy of hypertonia. Zhur.
nevr.i psikh. 53 no.12:942-950 D '53. (MLRA 6:12)

1. Nevrologicheskoye otdeleniye polikliniki No.3 (Riga). (Hypertension)

STREL'TSOVA, N.I.

Clinical and pathophysiological data on the onset and
development of schizophrenia. Zhur. nevr. i psikh. 64
no.1:75-79 '64. (MIRA 17:5)

1. Kafedra psikhiiatrii (zaveduyushchiy - prof. N.P. Tatarenko)
Khar'kovskogo meditsinskogo instituta.

BYLOW V.N., Acad. Biol. Sci.; ZAYTSEVA Ye.N., kand. biol.
nauk; MILKOVIDOVA N.D., red.; STREL'TSOVA N.P.,
red.

[Tulips; the best varieties] Tul'pany; luchshie sorta.
Moskva, Kolos, 1965. 126 p. (MIRA 18:7)

GEL'MAN, B.M.; KALASHNIKOV, P.A., spetsred.; STREL'TSOVA, N.P., red.;
ABELIN, P.G., khudozh.-tekh.n.red.

[Maintenance of tractors] Tekhnicheskii ukhod za traktorami.
Leningrad, Izd-vo M-va sel'.khoz.SSSR, 1961. 99 p.
(MIRA 14:2)

1. Zaveduyushchiy metodicheskim kabinetom Borovskogo uchilishcha
mekhanizatsii sel'skogo khozyaystva Kaluzhskoy oblasti (for
Gel'man).

(Tractors--Maintenance and repair)

BELIAYEV, I.M.; MUSHNIKOVA, K.S.; MILOVIDOVA, N.D., red.; STREL'TSOVA,
N.P., red.; KANTOROVICH, A.P., tekhn. red.

[Pests and diseases of grain crops] Vrediteli i bolezni zbr-
novykh kul'tur. Izd.2. n.p. Sel'khozizdat, 1963. 34 p.
(MIRA 16:10)

(Grain--Diseases and pests)

NIKIFOROV, A.M.; ZARING, P.V. [deceased]; MILOVIDOVA, N.D., red.;
STREL'TSOVA, N.P., red.; KANTOROVICH, A.P., tekhn. red.

[Pests and diseases of sugar beets] Vrediteli i bolezni
zakharnoi svekly. 2. izd. Leningrad, Sel'khozizdat,
1963. 34 p. (MIRA 17:4)

ZHUKOVA, K.P.; KAFKOVA, Ye.A.; KASIKHIN, A.N.; KOZLOVA, V.I.;
MILOVIDOVA, N.D., red.; STREL'TSOVA, N.P., red.

[Corn pests and diseases] Vrediteli i bolezni kukuruzy.
2. izd. Moskva, Sel'khozizdat, 1963. 34 p. (MIRA 17:4)

GERASIMOV, B.A.; OSHTSKAYA, Ye.A.; MILOVIDOVA, N.D., red.;
STREL'TSOVA, N.P., red.

[Pests and diseases of vegetable crops grown outdoors]
Vrediteli i bolezni ovoshchnykh kul'tur v otkrytom
grunte. Moskva, Kolos, 1964. 46 p. (MIRA 18:1)

STREL'TSOVA, O.A

USSR

62
②
The kinetics of ammonia synthesis when unaffected by diffusional inhibition. A. N. Gerasenkova, M. T. Rusov, and O. A. Strel'tsova. *Doklady Akad. Nauk. S.S.S.R.* 96, 1015-16(1954).—The synthesis and decomn. of NH_3 on double-promoted porous Fe catalyst were previously proved at the U.S.S.R. Acad. of Sci. to be greatly inhibited by diffusion through the catalyst pores at temp. above 300° and over a wide range of pressures. The present investigation of the kinetics of NH_3 synthesis was made under conditions that made the synthesis independent from external and internal diffusion processes. A thin Armco-Fe foil, 0.1 mm. thick, promoted with Al_2O_3 , was used as a catalyst by oxidizing the foil at $450-70^\circ$ with steam, and by applying $Al(OEt)_3$ to the surface by immersion in 10% $Al(NO_3)_3$ soln., drying, and keeping it in an atm. of NH_3 , then reducing with a N_2-H_2 mixt. Synthesis was studied at $400-500^\circ$ and at room temp. with a stoichiometric mixt. of gases. The reaction energy was found to be 59.0 ± 1.0 kcal./mol., and is higher than usually found with porous catalysts (40.0-46.5 kcal./mol.). W. M. Sternberg

STREL'TSOVA, R.D., inzhener; KOYRE, V.Ye., inzhener

Modern techniques for machining refined cast iron rolls. Vest.mash.
35 no.8:38-40 Ag'55. (MIRA 8:10)
(Machine-shop practice)

STREL'TSOVA, R.D., inzh.

Automatic control and accounting for the utilization of machine
tools. Mashinostroenie no.2:31-33 Mr-Apr '65. (MIRA 18:6)

USSR .

Preparation of dibutyl ether and dibutyl sulfate. S. G. Strel'tsova and S. B. Serebryanil. *Ukrain. Khim. Zhur.* 19, 681-3 (1953) (in Russian).—BuOH (I) (250 g.), 300 ml. Bu₂O (II), and 130 g. concd. H₂SO₄ (III) are heated 3 hrs. with a Dean-Stark trap (53 ml. H₂O collected), 50 g. I added, and the mixt. heated 1 hr., cooled, washed with H₂O, 1% Na₂CO₃, and H₂O, dried overnight (CaCl₂), and distd. *in vacuo* to yield 310 g. II, b₁₀₀ 105-7°, and 105 g. Bu₂SO₄, b₁₀₀ 115-16°. Elizabeth Barabash

Instit. Org. Chem., AS Ukr SSR

STREL'TSOVA, E. G.

Strel'tsova, E. G. -- "The Stereochemistry and Mechanism of Hydrogenation of Compounds with Multiple Bonds." Acad Sci Ukrainian SSR. Inst of Organic Chemistry. Kiev, 1956. (Dissertation for the Degree of Candidate in Chemical Science)

So: Enizhova Letopis', No 12, 1956

SHILOV, Ye.A.; STREL'TSOVA, S.G.

Stereochemistry and the nascent-hydrogen reduction mechanism of multiple-bond compounds. Part 1. Reduction of tolan by metals in alcohols and acetic acid. Ukr.khim.zhur.22 no.3:341-346 '56.
(MIRA 9:9)

1.Institut otganicheskoy khimii AN USSR.
(Acetylene) (Reduction, Chemical)

Strel'tsova, S. G.

✓ Stereochemistry and mechanism of reduction of compounds by nascent hydrogen. III. Reduction of ~~α,β~~ unsaturated carboxylic acids. S. G. Strel'tsova and E. A. Shilov. Ukrain. Khim. Zhur. 22, 648-652 (1955) (in Russian); cf. C.A. 51, 4330d. — The reduction of 0.05M PhC₆H₄CO₂H in 5M NaOH with pure Zn gives *trans*-PhCH₂CH₂CO₂H (I). A 4:1 Zn-Cu couple gives 32% *cis*-PhCH₂CH₂CO₂H (II) along with 52% I. This is the largest yield of II obtained. A Zn-Pt couple gives I, a 1:4 Zn-Ni couple forms 8% I and 18% II. The mechanism of the formation of I on pure Zn and II on combinations with Cu is discussed. J. H. S.

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Chem

PM my

✓ The cutaneous respiration of fishes. S. V. Strel'tsova.
Invest. Vsesoyuzn. Nauch.-Issledovatel. Inst. Ozer'nogo
Rybnogo Khoz. 33, 72-102(1963); Referat. Zhur.,
Khim. 1954, No. 44840. MD
B. Wierbicki

STREL'TSOVA, S.V.

✓ Seasonal changes in the respiration of fishes. G. N. Bogdanov and S. V. Strel'tsova. *Izvest. Vsesoyuz. Nauch.-Issledovatel. Inst. Ozerogo i Rechnogo Rybnogo Khoz.* 33, 103-15(1053); *Referat. Zhur., Khim.* 1954, No. 44839. E. Wierhicki

①

STREL'TSOVA, S.V.; BOGDANOV, G.N.

Changes in the respiration and hematological indices of carp during
wintering. Trudy sov.Ikht.kom. no.8: 271-277 '58. (MIRA 11:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut ozernogo i rechnogo
rybnogo khozyastva.
(Carp) (Cold--Physiological effect) (Fishes--Physiology)

PRIVOL'NEV, T.I.; STREL'TSOVA, S.V.; BRIZINOVA, P.M.; OSTROUMOVA, I.N.;
KUROLEVA, N.V.

Adaptation of fishes to new conditions of the environment. Vop.
ekol. 5:180-181 '62. (MIRA 16:6)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut ozernogo
i rechnogo rybnogo khozyaystva, Leningrad.
(Fishes--Physiology) (Adaptation (Biology))

STREL'TSOVA, S.V.; BRIZINOVA, P.N.; BOGDANOV, G.N.; OSTROUMOVA, I.N.

Physiological indices of the same species of fishes in different geographical locations. Vop. ekol. 5:208-209 '62. (MIRA 16:6)

1. Leningradskiy gosudarstvennyy nauchno-issledovatel'skiy institut oazernogo i rechnogo rybnogo khozyaystva.
(Fishes--Physiology)

BRIVOL'NEV, T.I.; STREL'TKOVA, S.V.; NIKOLINA, E.N.; OSTROMOVA, I.N.;
KOROLEVA, E.Y.

Prevention of lipoid liver degeneration of the rainbow trout
by adding phosphatides to its diet. Dokl. AN SSSR 156 no. 5:
1241-1243 Fe '64. (MIRA 17:6)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut ozernogo
i rechnogo rybnogo khozyaystva, Leningrad.

ARABADZHIAN, I.R., red.; IZMAYLOVA, R.A., red.; KRAYEV, G.A., red.
[deceased]; KRICHEVSKIY, I.Ye., red.; SOKOLOV, I.B., red.;
SOLNYSHKOV, V.A., red.; STREL'TSOVA, T.D., red.; FOMIN,
G.D., red.; SHUL'MAN, S.G., red.; ABRAMSON, L.S., tekhn.red.

[Collection of papers on hydraulic engineering] Sbornik dok-
ladov po gidrotekhnike. Moskva, Gosenergoizdat, 1962. 284 p.
(MIRA 17:3)

1. Nauchno-tekhnicheskaya konferentsiya molodykh nauchnykh
rabotnikov. 4th, 1962.

ARAVIN, V.I., prof., doktor tekhn. nauk; STREL'TSOVA, T.D., mladshiy nauchnyy
soтрудnik

Investigation of planned unsteady percolation on integrators. Izv.
VNIIG 76:157-167 '64. (MIRA 18:10)

STRENGTH AND STABILITY OF THE STRUCTURE

...ing a vertical watertight barrier is solving percolation problems.
rev. VNIIG 76:245-248 '64. (MIRA 18:10)

3

L 7890-66 EWT(m)/EPF(c)/EWP(j)/T/ETC(m) WW/RM
ACC NR: AP5024957 SOURCE CODE: UR/0286/65/000/016/0020/0020

AUTHORS: Golutvina, L. F.; Pavlov, S. A.; Avilov, A. A.; Butuzkina, Z. A.
Tsentsiper, Z. B.; Plotnikov, I. V.; Abramova, D. S.; Strel'tsova, V. I.

ORG: none

TITLE: Method for obtaining fireproof coverings. Class 8, No. 173702 15

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 20

TOPIC TAGS: fireproofing, fireproof covering, sodium bicarbonate, potassium bicarbonate, aluminum sulfate, high polymer, protective coating, fire resistant material, high temperature coating

ABSTRACT: This Author Certificate presents a method for obtaining fireproof coverings on the basis of high polymeric materials containing antipyrenes. To obtain self-extinguishing foam-forming coatings possessing high fire resistance and low heat conduction, a mixture of strong bases (for instance, sodium or potassium bicarbonate), salts of strong acids (for instance, aluminum sulfate), and salts containing water of crystallization (vitriols, alums, and others) are used as antipyrenes.

SUB CODE: MW/ SUBM DATE: 29Dec62

UDC: 678.049.91

Card 1/1

STREL'TSOVA, V. N.

"The Effect of Prolonged Intake of Radioactive Cerium Through the Gastrointestinal Tract on the Rat Organism," by Yu. I. Moskalev and V. N. Strel'tsova, Meditsinskaya Radiologiya, Vol 1, No 6, Nov/Dec 56, pp 14-20

A total of 131 white rats were administered cerium chloride (Ce 144) with their drinking water in daily doses as follows: first group, 1.5 microcuries per day for 100 days; second group, 15 microcuries per day for 100 days; and third group, 150 microcuries per day for 10, 25, 50, and 100 days.

In the resultant radiation sickness, changes in the gastrointestinal tract predominate. In the acute stage an acute, necrotic gastroenterocolitis with atrophy of the spleen and lymphoid tissue results; in the subacute and chronic phases, ulcerative colitis with selective localization of the ulcers in the cecum, the sigmoid colon, and the rectum results. The chronic stage is also accompanied by the development of tumors of the gastrointestinal tract, lungs, mammary glands, endocrine glands, etc.

In the above cases the diagnostic value of the blood indices was insignificant.

Tumors of the gastrointestinal tract and other organs result from identical ionization doses (10-28 krep), whether taken as a single dose or a prolonged dose, which is evidence of accumulation of the dose. (U)

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Country : USSR
 Category : Human and Animal Physiology, Physical Factors
 Abs. Jour. : Ref Zhur Biol, No. 2, 1959, No. 8573
 Author : Strel'tsova V. / Moskalev Yu.
 Institut. :
 Title : Long-range Consequences of Single and Chronic Entry of Radioactive Isotopes (Ce¹⁴⁴, Ru¹⁰⁶, Sr^{89,90}) through the Gastrointestinal tract.
 Orig. Pub. : Med. radiologiya, 1957, 2, No. 3, 23--34

Abstract : White rats were given Ce¹⁴⁴ in single doses of 100--100,000 microcuries or daily doses in the drinking water of 1.5--150 microcuries in the form of chlorides for a period of 100 days. Ru¹⁰⁶ was given in single doses of 450--7200 microcuries or daily doses of 1.6--800 microcuries. A 9:1 mixture of Sr⁸⁹ and Sr⁹⁰ was given daily for a hundred days in amount of 0.03--15 microcuries, and a single dose of Sr⁹⁰ amounting to 7.3--360 microcuries was employed. These doses exceed by one to three times the maximum allowable. The long-range result of their introduction were investigated by means of biopsy and necropsy of 264 rats, which succumbed after 200 days

Card: 1/4

Category : Human and Animal Physiology, Physical Factors

Abs. Jour. : Ref Zhur Biol, No. 2, 1959, No. 8573

Author :

Title :

Orig Pub. :

Abstract : In the chronic stage of radiation sickness. With prolonged administration of the isotopes, leukopenia developed, which was moderate in degree and disappeared rapidly (with a transition to leukocytosis) upon cessation of administration in the case of Ce¹⁴⁴ and Ru¹⁰⁶, but was more pronounced and lasted as long as the animal lived in the case of Sr^{90,89}. The latter isotopes, as they are well reabsorbed in the organism, also led to the development of leukosis (20%). The blastomogenic effect of Ce¹⁴⁴ and Ru¹⁰⁶ was manifested primarily in the gastrointestinal tract, while Sr^{89,90}, which is selectively laid down in the skeleton, led to the forma-

Card:

2/4

Country : USSR
Category : Human and Animal Physiology, Physical Factors T
Abs. Jour. : Ref Zhur Biol, No. 2, 1959, No. 8573
Author :
Title :
Orig Pub. :
Abstract : In the oral cavity with frequent damage to bones (with Sr^{99,90} and Ce¹⁴⁴), obesity, nodular periarteritis and nephrosclerosis (with Ru¹⁰⁶). Bibliography of 50 titles.
--E.B.Glikson

Card: 4/4

STREL'TSOVA, V. N.

PATHOLOGICAL ANATOMY OF LESIONS DUE TO La^{140}
 V. N. Strel'tsova. Med. Radiol. 2, No. 4, 78-83(1957)
 July-Aug. (In Russian)

Pathological morphology of lesions due to intravenous or intraperitoneal injection of La^{140} was studied. In chronic radiation sickness due to La^{140} a peculiar subacute hepatitis was observed in 40% and with cirrhosis in 20% of all treated rats. Large slowly healing ulcers were found in the appendix, in the intestine, and in the rectum. Malignant and benign tumors appeared on the skin or on the liver in 35% of the cases. A short acute stage followed by almost complete recovery was typical even in acute cases of radiation lesions caused by La^{140} . Pathological-anatomical changes caused by La^{140} are identical to those produced by Ce^{140} and Pm^{141} . (R-auth)

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1-Rmk
1-JWM

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Rmk

STREL'TSOVA, V. N.

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RADIOACTIVE ISOTOPES AS CANCEROGENIC AGENTS.
V. N. Strel'tsova and Ya. I. Moskalev. Med. Radiol. 2, No. 5, 39-51 (1957) Sept.-Oct. (In Russian)

A comparative analysis is presented of the cancerogenic effects of 15 radioactive isotopes (Sr^{90} , Sr^{90} , mixture of Sr^{90} and Sr^{90} , Ba^{140} , Y^{90} , Y^{90} , mixture of β emitters, Cs^{137} , Ca^{45} , Nb^{95} , Co^{60} , Pm^{147} , La^{140} , Ru^{106} , and Pu^{239}) which differ in their physical properties and distribution in the organism. The incidence of osteosarcomas depends on the quantity of the radioactive substance introduced and on the period of actual fixation, the higher the effective fixation period the higher is the percentage of tumor development. The optimal osteosarcomagenic dose of absorbed energy is 10 to 20 krep, the minimum dose 2 to 3 krep. The incidence of leukemias induced by radioactive isotopes ranges from 3 to 10%. The type of tumors, the location, and development processes depend on the character of distribution of the radioactive substances. (R.V.J.)

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1-RML

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STREL'TSOVA, V. N.

9930
 REMOTE EFFECTS OF SINGLE DOSES AND CHRONIC UPTAKE OF RADIOACTIVE ISOTOPES (Co^{60} , Ru^{106} , Sr^{90} and Sr^{89}) BY GASTRO-INTESTINAL TRACK. V. N. Strel'tsova and Ya. I. Moskalev. Med. Radiol. NO. 3, 23-34 (1957) May-June. (In Russian)

Def
Su-1 - AMZ
1 - JWM

Studies were made of the biological effects induced by Sr^{90} , Sr^{89} , Co^{60} , and Ru^{106} in single doses and continuous (100 days) uptake by the gastro-intestinal tract in quantities exceeding the maximum permissible doses in 1, 2, and 3 order. Experiments were made with 264 rats which perished in 200 days after the introduction of the radio-

active isotopes. During the continuous and single radio-isotopic uptake by intestinal tract the maximum swellings developed with the doses exceeding the order 2 to 3. The radiation sickness without the swellings was expressed by ulcerated enteritis of the colon with localizations in caecum, rectum, and colon (Co^{60} , Ru^{106}), by chronic inflammation in the oral area with injuries to the jaws, fragility and friability of bones (Sr^{90} , Sr^{89} , and Co^{60}), and by obesity, ganglion periarteritis, and nephrosclerosis (Ru^{106}). (R.V.J.)

AMZ
WT

STREL'TSOVA V N.

MOSKALEV, Yu.I.; STREL'TSOVA, V.N. (Moskva)

Effect of transection of the sciatic nerve on the blastomogenic effect of strontium 89 [with summary in English]. Biul. eksp. biol. i med. 44 no.7:96-99 J1 '57. (MIRA 10:12)

1. Predstavlena deystvitel'nyy chlenom AMN SSSR V.N.Chernigovskim.
(STROMTIUM, radioactive, carcinogenesis, eff. of section of sciatic nerve in animals (Rus))
(NEOPLASMS, experimental, eff. of sciatic nerve on carcinogenic eff. of radiostrontium (Rus))
(NERVES, SCIATIC, physiology, eff. of section on carcinogenic eff. of radiostrontium in animals (Rus))

KRAYEVSKIY, N. A., ZAKUTINSKIY, D. I., KURLYANDSEYAYA, E. B., MOSKALEV, Y. I.,
STRELISOVA, V. N., BURYKINA, L. N., LITVINOV, N. N. and SOLOV'YEV, Y. N.

10 "1958" V. N.

"Long-Term Effects Produced by Small Doses of Radioactive Substances in
Chronical Experiment."

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic
Energy, Geneva, 1 - 13 Sep 58.

STREL'TSOVA, V.N., BULDAKOV, L.A.

Data on the toxicology of radioactive ruthenium introduced through
the gastrointestinal system. Med.rad 3 no.5:37-50 8-0 '58
(MIRA 11:12)

(ISOTOPES, toxicity,
radiatoruthenium, in animals (Rus))

21(4); 17(0)

PHASE I BOOK EXPLOITATION

SOV/2000

STREL'TSOVA, V.N.

International Conference on the Peaceful Uses of Atomic Energy. 24, Geneva, 1958

Doklady sovetskikh uchenykh; radiobiologiya i radiatsionnaya meditsina (Reports of Soviet Scientists; Radiobiology and Radiation Medicine) Moscow, Izd-vo Glav. upr. po ispol'zovaniyu atomnoy energii pri Sovete Ministrov BSSR, 1959. 429 p. 8,000 copies printed. (Series: Vtoraya Mezhdunarodnaya konferentsiya po mirovomu ispol'zovaniyu atomnoy energii. Trudy, tom 5)

General Ed.: A.V. Lebedinskiy, Corresponding Member, USSR Academy of Medical Sciences; Ed.: Z.S. Shirokova; Tech. Ed.: Ye.I. Masel'.

PURPOSE: This book is intended for physicians, scientists, and engineers as well as for professors and students at vtuases where radiobiology and radiation medicine are taught.

COVERAGE: This is Volume 5 of a 6-volume set of reports delivered by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy, held on September 1-13, 1958, in Geneva. Volume 5 contains

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32 reports edited by Candidates of Medical Sciences S.V. Levinitskiy and V.V. Sedov. The reports cover problems of the biological effects of ionizing radiation, future consequences of radiation in small doses, genetic effects of radiation, treatment of radiation sickness, uses of radioactive isotopes in medical and biological research, uses of atomic energy for diagnostic and therapeutic purposes, soil absorption of uranium fission products, their intake by plants, and their storage in plants and foodstuffs. References accompany each report.

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Gorizontova, E.N. Problem of Pathogenesis of Acute Radiation Sickness in the Pathophysiological Phase (Report No. 2316)	13

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9

BUDKO, L.N.; STREL'TSOVA, V.N.

Effect on the rat organism of a single and prolonged intake of radioactive strontium through the gastrointestinal system [with summary in English]. Med.rad. 4 no.2:20-29 F '59. (MIRA 12:4)
(STRONTIUM, radioactive,
eff. of intra-oral intake on rat organism (Rus))

BURYKINA, L.N.; ZAKUTINSKIY, D.I.; KRAYEVSKIY, N.A.; KURLYANDSKAYA, E.B.; LITVINOV, N.N.;
MOSKALEV, Yu.I.; NOVIKOVA, A.P.; SOLOV'YEV, Yu. N.; STREL'TSOVA, V.N.

Late sequelae of lesions induced by radioactive substances in small doses
applied in a chronic experiment. Med. rad. 4 no.3:3-6 Apr '59. (MIRA 12:7)

(ISOTOPES, effects,

remote seq. of inj. by small doses of radioactive substances
in animals (Rus))

STREL'TSOVA, V.N.

Development of leukosis under the influence of ionizing radiations.
Med.rad. 4 no.12:66-79 D '59. (MIRA 13:5)
(LEUKEMIA etiol.)
(RADIATION INJURY compl.)

MOSKALEV, Yu.I.; STREL'TSOVA, V.N.

Blastomogenic activity of cerium¹⁴⁴. Vop.onk. 5 no.6:669-675 '59.
(MIRA 12:12)

1. Iz AMN SSSR, Moskva. Adres avtorov: Moskva, D-182, Sachukinskaya ul.,
d.34, kv.11)

(ISOTOPES, eff.

radiocerium, blastomogenic eff. in rats (Rus))

(NEOPLASMS, exper.

blastomogenic eff. of radiocerium in rats (Rus))

EXCERPTA MEDICA Sec 16 Vol 7/12 Cancer Dec 59

***5024. The regularity in the appearance of osteogenic sarcoma induced with radioisotopes (Russian text)** STRELIZOVA V. N. Med. Acad. of Sci., Moscow *Vopr. Onkol.* 1959, 5:3 (131-140) Tables 5

Rats and rabbits were administered Sr⁹⁰, Sr^{90m}, Sr⁸⁹, Si³², Y⁹⁰, Y⁹¹, Ba¹³³, Pu²³⁹, Ce¹⁴¹, Pm¹⁴⁷, new and old solutions of the products of uranium splitting. The frequency, type, localization, and peculiarities of growth of the developing osteosarcomas were studied. Injection of these isotopes in a dose of 0.005-1.5 µc./g. caused osteosarcomas in 1-100% of the animals that had survived for over 200 days. The incidence of osteosarcomas, the forms of growth, the multiplicity of origin, and the degree of tumour cell dedifferentiation were proportional to the quantity of isotopes administered. Survival of the animals with tumours and the degree of metastasization were inversely proportional to the dose administered.

(XVI, 5, 14)

STREL'TSOVA, V.N.; MOSKALEV, Yu.I.

Carcinogenic effect of a mixture of isotopes Sr⁸⁹ and Sr⁹⁰ in
rabbits. Vop.onk. 5 no.10:388-395 '59. (MIRA 13:12)
(STRONTIUM--ISOTOPES) (TUMORS)

SAKULIN, I.P.; STREL'TSOVA, V.N.; RESHETNIKOVA, A.F.; DAVYDOVA, A.L.;
STEPANOVA, S.V.

Data on the epidemiology of influenza in Sverdlovsk in 1959. Zhur.
mikrobiol. epid. i immun. 31 no. 121-124 0 '60. (MIRA 13:12)

1. Iz Sverdlovskogo meditsinskogo instituta.
(SVERDLOVSK—INFLUENZA)

STREL'TSOVA, V. N., Doc MED SCI, "ABOUT TUMORS, DE-
VELOPING UNDER THE ACTION OF RADIOACTIVE PRODUCTS OF
URANIUM FISSION. (EXPERIMENTAL ^{study} INVESTIGATION)." MOS-
COW, 1961. (ACAD MED SCI USSR). (KL, 3-61, 229).

377

MOSKALEV, Yu.I.; BULDAKOV, L.A.; STREL'TSOVA, V.N.

Relation between the biological effect of plutonium and the rhythm
of its introduction into the organism. Radiobiologia 1 no.2:250-
256 '61. (MIRA 14:7)

(PLUTONIUM—PHYSIOLOGICAL EFFECT)

STREL'TSOVA, V.N.

Tumors of the liver developing under the influence of Ce^{144} .
Ark. pat. 23 no.3:9-16 '61. (MIRA 14:3)
(LIVER--TUMORS) (CERIUM--ISOTOPES)

SAKULIN, I.P.; STREL'TSOVA, V.N.; RESHETNIKOVA, A.F.; DAVYDOVA, A.L.;
STEPANOVA, S.V.

Material on the epidemiology of influenza in Sverdlovsk in 1959.
Zhur.mikrobiol.epid.i immun. 32 no.1:137-140 Ja '61. (MIRA 14:6)

1. Iz kafedry epidemiologii Sverdlovskogo meditsinskogo instituta.
(SVERDLOVSK—INFLUENZA)

BULDAKOV, L.A.; MOSKALEV, Yu.I.; STREL'TSOVA, V.N.

Data on the biological activity of plutonium-239. Biul.
eksp. biol. i med. 52 no.11:57-61 N '61. (MIRA 15:3)

1. Predstavlena deystvitel'nym chlenom AMN SSSR A.V.
Lebedinskim.

(PLUTONIUM--ISOTOPES)

44072

S/742/62/000/000/014/021
I015/I215

AUTHORS: Moskalev, Yu.I., Buldakov, L.A., Strel'tsova, V.N.

TITLE: The effect of plutonium-239 on the rat

SOURCE: Plutoni-239; raspredeloniye, biologicheskoye deystviye, uskoreniye vyvedeniya. Ed. by A.V. Lebedinskiy and Yu.I. Moskalev. Moscow, Medgiz, 1962, 86-91

TEXT: The biological effect of alpha-rays of plutonium has been insufficiently studied. Experiments were carried out on 269 albino rats weighing 162 ± 3.3 - 201 ± 7.5 g. A single dose of 1.25, 2.5, 5.0, 10.0, 20.0, 40.0 and $80.0 \mu\text{Cu}/\text{kg}$ b.w. of plutonium citrate (pH = 6.0) was administered i.p. The blood cells and the hemoglobine as well as weight changes and the survival were investigated in all the animals. The survival-dose relationship was inversely dependent:

Card 1/2

jection.
in RBC count

44075
S/742/62/000/000/017/021
1015/1215

271220
AUTHOR:

Strel'tsova, V.N.

TITLE:

Pathologic anatomy of plutonium-239 injuries

SOURCE:

Plutoniy-239; raspredelchniye, biologicheskoye deystviye, uskoreniye vyvedeniya. Ed. by A.V. Lebedinskiy and Yu.I. Moskalév. Moscow, Medgiz, 1962, 115-128

TEXT:

The morphological changes in cases of acute and subacute injuries caused by Pu²³⁹ have been insufficiently studied. Experiments were carried out on 114 albino rats and 6 dogs. Seventy five rats received plutonium citrate (Pu⁺⁺⁺-1% in a solution of 0.015M and a ionic strength of 0.05M, calculated for citrate-ions, Na⁺ and Cl⁻, pH = 6) intravenously (250 - 1.25 μ Cu/kg b.w.) and 39 rats were injected i.m. with 60 - 1.25 μ Cu/kg b.w. The dogs received 3 - 1.25

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S/742/62/000/000/017/021
I015/I215

Pathologic anatomy of plutonium-239...

$\mu\text{Ci/kg}$ b.w. i.m. The material was fixed in 10% formalin solution and embedded in celloidin-paraffin. Sections were stained with hematoxylin-eosin, van Gieson's method, Sudan-3 + hematoxylin and also in some instances with Foot's silver method. Autoradiographic investigations of bone and parenchymatous organs were performed as well. The acute radiation injury caused by Pu was characterized by the presence of hemorrhagic diathesis and of destructive changes in hemopoietic organs with subsequent appearance of anemia, leucopenia and necrobiotic changes in the intestinal mucose and liver parenchyma. Liver cirrhosis developed in rats and dogs in cases of chronic plutonium injuries. Nephrosclerosis, various types of leukemia and osteosarcoma were common features accompanying chronic Pu injuries. The dogs turned out to be as much as ten times more sensitive to Pu than the rats were. The rats developed bone and mammary gland neoplasias following

Card 2/3

KRAYEVSKIY, N.A.; STREL'TSOVA, V.N.; MOSKALEV, Yu.I.

Elasomogenic action of small quantities of radioactive isotopes.
Med.rad. 7 no.7:68-72 J1 '62. (MIRA 15:11)
(RADIOISOTOPES—PHYSIOLOGICAL EFFECT)
(CARCINOGENESIS)

POLUBOYARINOVA, Z.I. (Moskva, D-182, Zhivopisnaya ul., 24, kv. 33);
STREI'TSOVA, V.N. (Moskva, D-182, Shchukinskaya malaya ul.,
10-a, kv.19)

Appearance of multiple neoplasms in dogs under the influence
of Sr⁹⁰. Vop. onk. 8 no.11:16-20 '62. (MIRA 17:6)

1. Iz Akademii meditsinskikh nauk SSSR.

STREL'TSOVA, V. N., MOSKALEV, Yu. I., PETROVICH, I. K.,

"Biological effect of fast neutrons and protons of high energy"

report to be submitted for the Symposium on Biological Effects of Neutron Irradiations
(IAEA), Upton Long Island, N. Y., 7-11 Oct 63.

STREL'TSOVA, Vera Nikolayevna; MOSKALEV, Yuriy Ivanovich;
LANDAU-TYLIKINA, S.P., red.; LYUDKOVSKAYA, N.I., tekhn.
red.

[Blastomogenic effect of ionizing radiation] Blastomogen-
noe deistvie ioniziruiushchei radiatsii. Moskva, Meditsina,
1964. 382 p. (MIRA 17:3)

OTREL'TSOVA, V. N. "Tumors Developing Under the Influence of Radioactive Fission Products of Uranium." The cancerogenic effects of a large number of radioactive isotopes were studied as well as the role of physiological factors in radiation cancerogenesis.

candidate dissertation listed in Meditsinskaya radiologiya, no. 7, 1964. The article did not state specifically what degree was awarded. The annotated titles deal with studies on radiation physiology, radiation biochemistry, combined trauma and the influence of radiation on regenerative processes, radiation microbiology and immunology, and radiation pharmacology.

L 13546-65 EWG(j)/EWT(m) SSD/AFWL/AMD/Pb-4
ACCESSION NR: AP4042742 S/0211/64/009/007/0022/0027

AUTHOR: Poluboyarinova, Z. I.; Strel'tsova, V. N.

TITLE: Mechanism of functional and morphological changes in kidneys of rats treated with unithiol for radiation sickness (Po²¹⁰)

SOURCE: Meditsinskaya radiologiya, v. 9, no. 7, 1964, 22-27

TOPIC TAGS: carcinoma, mammary gland carcinoma, radiation therapy, leukopenia, blood count

ABSTRACT: Acute radiation sickness was induced in 80 experimental white male rats (150 to 180 g) with a subcutaneous Po²¹⁰ injection (0.075 microcuries/kg) and 20 animals served as a control. Forty-five of the 80 experimental animals were treated with unithiol (100 mg/kg dose) twice daily for 6 days, and the control animals received the same unithiol therapy. Unithiol in the form of a 5% solution prepared with a 0.2% sodium bicarbonate solution was used. General condition of animals was determined by body weight changes and blood indices, and the functional state of the kidneys was determined by diuresis and specific gravity of urine. Animals were

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L 13546-65

ACCESSION NR: AP4042742

killed at various periods ranging from 10 min to 50 days following the Po^{210} injection and unithiol therapy, and morphological and histoauto-radiographic investigations of the kidneys were made. Findings show that unithiol therapy increases the life expectancy of Po^{210} -affected animals by increasing kidney isotope excretion and intensifying body regeneration reactions. At the same time a functional disorder of the kidneys in which the glomerulus becomes inadequate appears, changing gradually to nephrosclerosis. In both experimental and control animals, unithiol inhibits diuresis the first 3 or 4 days, and in the following days polyuria of a compensatory nature is found. Morphological investigations of control animal kidneys show that unithiol causes marked hyperemia of glomerulus capillaries and stroma during the first seven days and is followed by a transitory increase of cells in the glomerulus which disappears by the 14th day. The therapeutic effect of unithiol in Po^{210} -affected animals is based on reducing the period of degenerative necrobiotic kidney changes and accelerating the regeneration period. However, this regeneration does not ensure complete restoration, but is limited to proliferation of epithelium in renal tubules without subsequent differentiation. The basic mass of dead elements in the renal parenchyma is replaced by

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L 13546-65

ACCESSION NR: AP4042742

connective tissue with the development of nephrosclerosis. Orig. art.
has: 5 figures. 0

ASSOCIATION: None

SUBMITTED: 12Aug63

ENCL: 00

SUB CODE: LS

NR REF SOV: 005

OTHER: 002

Card 3/3

GRAYEVSKIY, E.Ya.; KOROGODIN, V.I.; KUZIN, A.M., ; MOSKALEV,
Yu.I.; SMIRNOV, K.V.; STREL'KOVA, V.N.; SHAPIRO, N.I.,
doktor biol. nauk; SHIKHOMIROV, V.V.; BYLUS, L.Kh.;
ALEKSAKHIN, A.F., red.

[Principles of radiobiology] Osnovy radiatsionnoi bio-
logii. Moskva, Nauka, 1964. 402 p. (MIRA 18:1)

1. Akademiya nauk SSSR. Institut biologicheskoy fiziki.
2. Chlen-korrespondent AN SSSR (for Kuzin).

L 34112-25 EWC(S)/EWT(m) GS
ACCESSION NR: AT5006123

S/0000/64/000/000/0192/0201

AUTHOR: Moskalev, Yu. I.; Strel'tsova, V. N.; Teplinskaya, G. N.

TITLE: Biological effects of strontium-90 in relation to the duration and frequency of uptake of the isotope

SOURCE: Raspredeleniye, biologicheskoye deystviye, uskoreniye vyvedeniya radioaktivnykh izotopov (Distribution, biological effect, acceleration of the excretion of radioactive isotopes); sbornik rabot. Moscow, Izd-vo Meditsina, 1964, 192-201

TOPIC TAGS: strontium-90, radioisotope, radioactivity, blood, tumor, leukemia

ABSTRACT: The results of experiments on 699 white rats showed that the rate of administration of strontium-90 as well as the dose markedly contributed to the biological effects of the isotope. For example, shortening of the survival time, lag in weight increase, degree of leukopenia and thrombocytopenia, and frequency of osteosarcomas were greatest after a single administration of strontium-90. On the other hand, the development of anemia and leukemia was not related to the frequency of uptake of the isotope, which indicates that after Sr⁹⁰ lesions the processes of summation and regeneration in different tissues took place at different rates. This was also true of the erythrocyte series. The values of LD_{50/240} after a single

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L 3411-55

ACCESSION NR: AT5006123

administration of Sr⁹⁰ were 224 and 126 μ c per rat; with daily administration for 100 days, they were 776 and 209 μ c per rat, respectively. Orig. art. has: 6 figures, 3 tables.

ASSOCIATION: none

SUBMITTED: 10Apr64

NO REF SOV: 000

ENCL: 00

OTHER: 000

SUB CODE: LS

Card 2/2

L 34129-65 EWG(j)/EWT(m) GS

ACCESSION NR: AT5006132

S/0000/64/000/000/0251/0272

AUTHOR: Strel'tsova, V. N.

TITLE: Pathological anatomy of radiation injury induced by promethium-147

SOURCE: Raspredeleniye, biologicheskoye deystviye, uskoreniye vyvedeniya radioaktivnykh izotopov (Distribution, biological effect, acceleration of the excretion of radioactive isotopes); sbornik rabot. Moscow, Izd-vo Meditsina, 1964, 251-272

TOPIC TAGS: promethium-147, radioisotope, radioactivity, radiation injury, liver, blood, tumor, bone marrow, kidney

ABSTRACT: Description of the pathological changes that developed in rats after acute, subacute, and chronic injury induced by parenteral injection of Pm¹⁴⁷. Acute injury by a soft beta emitter was characterized by aplastic changes in the hemopoietic tissue of bone marrow and the spleen, disturbances of the capillary circulation of the liver with atonia and persistent dilatation of the capillaries and small veins, degenerative changes in the liver and kidneys (albuminous and fatty degeneration, necrosis), and necrobiotic changes in the intestinal mucosa typical of ulcerative enterocolitis.

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L 34129-65

ACCESSION NR: AT5006132

Subacute injury was in the form of specific parenchymatous hepatitis with a shifting relationship between the degenerative, proliferative, reparative, and sclerotic processes and the formation of cirrhosis developing against a background of atrophic changes in the hematopoietic organs accompanied by lympho-, leuko-, and erythropenia.

Chronic injury reflected the polymorphism of the pathological processes. The predominant features were tumors in various sites (osteosarcomas, malignant and benign tumors of soft tissues) or liver pathology (chronic hepatitis and cirrhosis), hyperplastic tumor disease of the hematopoietic organs (leukemia), and panangitis. Orig. art. has: 28 figures, 5 tables.

ASSOCIATION: none

SUBMITTED: 10Apr64

ENCL: 00

SUB CODE: LS

NO REF SOV: 000

OTHER: 000

Card 2/2

L 34128-65 EWG(j)/EWT(m) GS
ACCESSION NR: AT5006133

S/0000/64/000/000/0273/0288

AUTHOR: Strel'tsova, V. N.

TITLE: Pathological anatomy of radiation injury induced by niobium-95

12
B+1

SOURCE: Raspredeleniye, biologicheskoye deystviye, uskoreniye vyvedeniya radio-aktivnykh izotopov (Distribution, biological effect, acceleration of the excretion of radioactive isotopes); sbornik rabot. Moscow, Izd-vo Meditsina, 1964, 273-288

TOPIC TAGS: niobium-95, radioisotope, radioactivity, liver, lymphatic system, kidney, tumor, spermatogenesis

ABSTRACT: Description of the pathological changes that developed in 3-month-old rats after acute, subacute, and chronic injury induced by parenteral injection of Nb⁹⁵. Acute injury (9-18 µc/g) was characterized by initial suppression of bone-marrow hematopoiesis followed by restoration in 14-16 days and rapid normalization of the ratio of immature to mature cell forms; predominance of degenerativenecrotic changes in the parenchymatous organs with very severe kidney damage; early suppression of spermatogenesis and disappearance of germinal cells.

Subacute injury by Nb⁹⁵ (1.1, 4.5, 9 µc/g) involved the coexistence of

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L 34128-65

ACCESSION NR: AT5006133

atrophic, degenerative, and regenerative processes in the parenchymatous organs. The hematopoietic tissue of bone marrow exhibited a predominance of the restorative processes while lymphoid tissue at this time reflected the processes of death and new formation of lymphoid cells, the former predominating. Spermatogenesis had ceased and degenerative changes were noted in renal parenchyma (granular degeneration and necrosis of the epithelium of the convoluted tubules. Inflammatory processes of bacterial origin could be seen in all the animals.

The chronic stage of radiation injury by Nb⁹⁵ (1.1, 2.25, 4.5, and 6.3 $\mu\text{c/g}$) was characterized by the formation of benign and malignant tumors of the mammary glands, small intestine, subcutaneous hematopoietic organs (reticuloendotheliosis) in 25% of the rats that survived more than 200 days, or in 17% of all the experimental animals (half the tumors developed after intraperitoneal injection of 6.3 $\mu\text{c/g}$); abnormally high hyperplasia of the reticuloendothelial elements of bone marrow, spleen, and liver; occasional cases of reticulosarcomatosis; suppression of spermatogenesis. Orig. art. has: 23 figures, 1 table.

ASSOCIATION: none

Card 2/3

POLUBOYARINOVA, Z.I.; STREL'TSOVA, V.N.

Mechanism of functional and morphological renal changes in radiation sickness (Po210) in rats treated with unithiol. Med. rad. 9 no.7:22-27 J1 '64. (MIRA 18:5)

НОСЛАВ, Я.И.; СРЕБЕТОВА, В.И. (Москва)

Радиационно-индуцированное окисление. Изв. высш. шк. 1970, № 9:10-12
стр. 105. (МIRA 18:9)

STREITBA, V.N. (Moskva); MOSKALEV, Yu.I. (Moskva); PETROVICH, I.K. (Moskva)

Cardiogenic effects of high-energy protons. Vop. onk. 10 no.9:
74-77 '64. (MIRA 18:4)

ГОЛЫЦЫН ИВАН, В.И. (Москва); СИДИКОВА, В.Н. (Москва)

Dyshormonal tumors in dogs following the administration of
strontium-90. Top. onk. 11 no.12:45-48 '65. (MIA 19:1)

L 03773-67 EWT(m) GD

SOURCE CODE: UR/0000/66/000/000/0202/0214

ACC NR: AT6029631

AUTHOR: Petrovich, I. K.; Moskalev, Yu. I.; Strel'tsova, V. N.

33
B+1

ORG: none

TITLE: Dose-effect relationships for 120-Mev protons observed during long-term experiments

SOURCE: Voprosy obshchey radiobiologii (Problems of general radiobiology). Moscow, Atomizdat, 1966, 212-214.

TOPIC TAGS: proton, radiation biologic effect, ~~relative biological efficiency~~, rat, ~~radiation-hematologic effect~~ *hematology hematology*

ABSTRACT: Experiments were conducted to determine the biological effect of 120-Mev protons, which has not been studied previously. Ten groups of rats 3-4 months old were irradiated once with protons from the OIYA1 synchrocyclotron at Dubna in doses of 10-1000 rad (dose rate 0.3 rad/sec). Animals were placed in revolving chambers to ensure uniformity of irradiation. The following criteria of the radiation effect were examined from the standpoint of long-term influence: dependence of length of life on radiation dose, blood composition, and the time of appearance, frequency of appearance, and character of tumors. Experimental results showed that the LD50 for rats dying within 30, 60, 120, and 240 days was practically identical. The death rate was equivalent in males and females for a given dose, except in the remote aftereffect

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L 03773-67

ACC NR: AT6029631

period (480 and 600 days), when females were more radiosensitive due to neoplasms in mammary and other secretory glands. It was found that 120-Mev protons have the same RBE as 500-Mev protons, which is approximately 0.7 as compared with gamma-rays. The average lengths of life of animals irradiated with various doses of 120-Mev protons are shown in Table 1. The number of animals dying in a given period increases with

Table 1. Average length of life of rats dying in later periods of the experiment (after 4 months) after irradiation with 120-Mev protons

Dose, rad	Average length of life, days	
	Male	Female
0	537±53	560±25
10	567±51	484±53
50	657±76	578±41
100	530±37	477±35
200	574±67	549±45
400	495±47	412±29
600	466±57	443±29
700	—	467±49
800	319±14	363±53

Card 2/3

L 00773-67

ACC NR: AT6029631

0

increasing dose. However, the average length of life of rats dying in this period does not depend on the dose: for example, the average length of life of rats dying 16—30 days after irradiation with doses of 400, 600, 700 and 800 rad was 23, 22, 22, and 23 days, respectively. Neutropenia and lymphocytopenia were noted in the early postradiation period, together with a considerable drop in erythrocyte content with doses from 700—1000 rad. The highest incidence of tumor formation in irradiated animals was noted in the following organs and tissues: mammary glands, hematopoietic tissue, thyroid gland, adrenal glands, subcutaneous cellular tissue, kidneys, bones, uterus, thymus, and prostate gland. A higher frequency of mammary-gland tumors was observed in females irradiated with 50—600 rad of protons than in the controls. Furthermore, the total frequency of thyroid tumors in irradiated male and female rats (doses of 10—800 rad) was found to be 9.8%, which is ten times higher than the control rate. Complete data are lacking to establish the relationship of dose to frequency of occurrence of tumors in all tissues. Orig. art. has: 4 tables and 8 figures. [JS]

SUB CODE: 06/ SUBM DATE: 23Apr66/ ORIG 004/ OTH REF: 001/ ATD PRESS: 5064

Card 3/3

L 1452-67 FWR(m)
ACC NR: AP6033868

SOURCE CODE: UR/0205/66/006/005/0660/0665

AUTHOR: Strel'tsova, V. N.; Moskalev, Yu. I.

ORG: none

TITLE: The blastomogenic effect of 120-Mev protons

SOURCE: Radiobiologiya, v. 6, no. 5, 1966, 660-665

TOPIC TAGS: proton radiation biologic effect, radiation tissue effect, rat, carcinoma

ABSTRACT: In order to study the blastomogenic effect of 120-Mev protons in the dose range 10—800 rad, Wistar rats were irradiated once with protons from the OIYaI synchrocyclotron at Dubna. The dose rate was 0.3 rad/sec. Experimental results showed that in proton-irradiated rats the frequency of appearance of both benign and malignant tumors in the following tissues was higher than in controls: mammary glands, hemogenic tissue, thyroid gland, adrenals, hypodermic tissue, kidneys, bones, uterus, thymus, and prostate gland. It was observed that in female rats the incidence of tumors and of multiple neoplasms was considerably higher in both irradiated and control groups than corresponding rates for male rats. Of course, the high incidence of neoplasms in females is connected with the sensitivity of mammary glands, hypophysis, ovaries, and uterus to tumor formation. More mammary tumors appeared in female rats irradiated with 50—600 rad, and tumors developed

Card 1/2

UDC: 539.125.4:616.006.04

L 04575-67

ACC NR: AP6033868

faster than in controls (7 months in experimental animals and 12 months in controls). The incidence of leukosis in irradiated males and females (doses 200—400 rad) increased to 11.4%, as compared with 1.7% in controls. It was established that the dose required to double the spontaneous incidence of leukosis in rats is 50 rad. The highest incidence of pituitary tumors in female rats (34.3%) was observed with radiation doses of 200 rad, and the highest incidence for males (42%), after irradiation with 50 rad. With doses above these levels, the incidence of pituitary tumors dropped in both males and females. Data for the other tissues and organs studied are: incidence of adrenal tumors increased with 100 rad of protons or more, thyroid tumors--25—50 rad, kidney tumors--600 rad, and tumors of the gastrointestinal tract 100—600 rad. Orig. art. has: 5 figures and 1 table.

SUB CODE: 06/ SUBM DATE: 08Apr65/ ORIG REF: 005/ OTH REF: 001/ ATD PRESS:
5100

Card 2/2 vmb

STREL'TSOVA, YE. A.

Mr., Inst. Microbiology, Dept. Biol. Sci., Acad. Sci., -c1948-.
Mr., Central State Sci. Testing Controlling Inst. Bacteriol.
Preparations im. Tarasevich, Moscow, 1947. "The Nature of a
Bacteriophage," Mikrobiologiya, 17, No. 4, 1948; ". . . IV.
The Lytic Activity of the Bacteriophage as Indicating the Condition
of the Phagocytes," ibid., No. 6, 1948.

STREL'TSOVA, Ye. A.

USSR/Physics - Distribution Functions

FD-617

Card 1/1 : Pub. 146-7/18

Author : Strel'tsova, Ye. A.

Title : Distribution functions for systems with Coulomb interaction

Periodical : Zhur. eksp. i teor. fiz. 26, 173-178, February 1954

Abstract : Sets up and solves the integral equations for the molecular functions of distribution for a system with Coulomb forces. The solution of this problem is based on the application of methods of asymptotic power expansions of a specially chosen small parameter, these expansions having been worked out previously by N. N. Bogolyubov.

Institution : Kiev Technological Inst of Light Industry

Submitted : 9 October 51; After corrections: 6 November 1953

STREL'TSOVA, YE. A.

20-5-28/48

AUTHOR: Strel'tsova, Ye. A.

TITLE: Kinetic Equations in the Theory of Electrolytes (Kineticheskiye uravneniya v teorii elektrolitov).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 5, pp. 820-822 (USSR)

ABSTRACT: The present works investigates the general problem of the determination of kinetic equations for the physical distribution of probabilities for a certain position of the particles present in a liquid. These particles are in interaction with one another by a prefixed potential. The interaction of the particles with the liquid is represented by means of a certain stochastic process of the diffusion type. The problem formed here is solved by means of the static method of N. N. Bogolyubov. In this method a number of distribution functions is used for the groups of s particles in the case of random distribution of the residual (Gibbs) distribution function of all N particles of the system. The general scheme is used with a strong electrolyte. As equations of first approximation the known equations of Onsager (Onzager) are obtained. The course of the

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Kinetic Equations in the Theory of Electrolytes.

20-5-28/48

calculation is shown. The method discussed can also be applied for the determination of equations of higher approximation. There are 4 references, 2 of which are Slavic.

ASSOCIATION: Kiyev Light Industry Technological Institute
(Kiyevskiy tekhnologicheskij institut legkoy promyshlennosti).

PRESENTED: May 7, 1957, by N. N. Bogolyubov, Academician

SUBMITTED: April 27, 1957.

AVAILABLE: Library of Congress

Card 2/2

AUTHORS: Glizman, Ia. M., Djikan, I. M., Strel'tsova, Ye. A., 20-117-5-29/54

TITLE: The Antagonism of Ions in the Coagulation of Lyophobic Sols by Electrolytes (Ob antagonizme ionov pri koagulyatsii liofobnykh zoley elektrolitami).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 5, pp. 829-832 (USSR)

ABSTRACT: In a preliminary paper of the authors (reference 1) it was shown, that on the coagulation of lyophobic sols by a mixture of two symmetric electrolytes of the type $1 - 1 + 2 - 2$ the synergism effect must be taken into consideration almost in the whole range of their concentrations. At the same time the supposition was pronounced, that in the case of a differing composition of the electrolytes the computations may furnish quite different results. The present investigation is destined to examine the correctness of this assumption. The authors conducted computations analogous to the ones mentioned in the preliminary paper, especially for the case of the coagulation of a sol by a mixture of electrolytes of the type $1_2 - 2 + 2 - 2$. At first a differential equation for the electrolytic potential in an arbitrary point of the solution is given. This potential Ψ is then, for the sake of convenience, replaced by a dimensionless potential. Besides, the sol is here supposed to be strongly charged. The whole range of the possible concentrations n_1 and n_2 is of identical interest for the problem

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The Antagonism of Ions in the Coagulation of Lyophobic Sols by Electrolytes. 20-117-5 -29/54

Investigated here. The parameter n_1 is here considered to be infinitely small, and it is sufficient to break off the series expansion with respect to n_1 after the first term. Then formulae corresponding to this approximation are written down. The course of the computation is followed step by step and shows the subsequent results; The rules of the coagulation of lyophobic sols by mixture of electrolytes of the type 1 - 1 +2 -2 and 12 -2 +2 - 2 are opposed to each other in a qualitative sense. In the first case the synergism is substantiated theoretically and in the second case the theory leads to a sharply pronounced antagonism. In the coagulation of lyophobic colloides there must be distinguished two types of antagonisms: 1) An antagonism connected with the competition for the adsorption places on the surface of the colloidal particles. 2) An antagonism caused by the electrostatic interaction of the ions in the volume of the solution and in the electric field of the colloidal particles. There are 3 references, 2 of which are Slavic.

PRESENTED: June 10, 1957, by P. A. Rebinder, Academician

SUBMITTED: June 7, 1957

Card 2/2

69-58-2 -4/23

AUTHORS: Glazman, Yu.M.; Dykman, I.M.; Strel'tsova, Ye.A.

TITLE: The Coagulation of Lyophobic Sols by the Action of Electrolyte Mixtures. Communication 2. (O koagulyatsii liofobnykh zoley pri deystvii smesey elektrolitov. Soobshcheniye 2)

PERIODICAL: Kolloidnyy zhurnal, 1958, Vol XX, Nr 2, pp 149-158 (USSR)

ABSTRACT: During coagulation of lyophobic sols, caused by the mixture of two symmetrical electrolytes of the 1-1+2-2 type, a synergistic effect takes place within their concentration range. The action of these two electrolytes is accompanied by two contradicting factors. Synergism is caused by the addition of the electrolyte and is connected with the compression of a diffused ion atmosphere. A tendency toward antagonism is caused by the screening of the anions of the electrical field. Electrolytes of the 1₂-2+2-2 type have also been considered. The principal difference of the two types consists in the fact that the side ion of the first of the two electrolytes is bivalent. The theoretical calculation indicates antagonism, whereas in the 1-1+2-2 type it indicates synergism. There are two types of antagonism during the coagulation of lyophobic colloids: 1) the antagonism between

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69-58-2 -4/23

The Coagulation of Lyophobic Sols by the Action of Electrolyte Mixtures.
Communication 2

coagulating ions associated with competition for the sites of adsorption on the surface of the colloid particles: 2) the antagonism due to the mutual electrostatic interaction of the ions in the bulk of the solution and in the electrical field of the colloid particles.

There are 8 references, 6 of which are Soviet, 1 French and 1 German.

ASSOCIATION: Kiyevskiy tekhnologicheskii institut legkoy promyshlennosti
(Kiev Technological Institute of Light Industry)

SUBMITTED: February 23, 1957

1. Chemical compounds--Coagulation 2. Electrolytic compounds
--Applications

Card 2/2

1 (1), 1 (2)

AUTHOR: Strel'tsova, Ye.A. (Kiyev)

SOV/41-11-1-7/12

TITLE: Unsteady processes in the Electrolytic Theory

PERIODICAL: Ukrainskiy matematicheskiy zhurnal, 1959, Vol 11, No 1,
pp 83-92 (USSR)

ABSTRACT: The author seeks kinetic equations for the distribution of the situation probabilities of particles being in a fluid and the interaction of which is described by a given potential. The interaction with the fluid is understood as a stochastic process with a diffusion type. The problem is solved according to the method of N.S. Bogolyubov [Ref 3]. The developed general scheme of solution is applied in the case of a strong electrolyte. As the first approximation there appear the well-known equations of Onsager.
There are 5 references, 2 of which are Soviet, and 3 German.

SUBMITTED: May 18, 1957

Card 1/1

STREL'TSOVA, Ye.A.

Determination of the electrophoretic velocity of an ion by the method of distribution of functions. Dokl.AN SSSR 144 no.2: 300-302 My '62. (MIRA 15:5)

1. Kiyevskiy tekhnologicheskii institut legkoy promyshlennosti.
Predstavleno akademikom N.N.Bogolyubovym.
(Ions--Migration and velocity) (Electrophoresis)

STREL'TSOVA, Ye.A. [Strel'tsova, O.G.]

Electroconductivity of solutions of strong electrolytes. Rep.
AN URSSR no.11:1468-1469 '63. (MIRA 17:12)

1. Kiyevskiy tekhnologicheskii institut promyshlennosti.

L 07177-67 EWT(d) IJP(c)

ACC NR: AP6031191

SOURCE CODE: UR/0041/66/018/005/0069/0083

AUTHOR: Strel'tsova, Ye. A. (Kiev)

37
36
B

ORG: none

TITLE: Distribution functions for systems of charged particles, taking short range forces into account

SOURCE: Ukrainskiy matematicheskiy zhurnal, v. 18, no. 5, 1966, 69-83

TOPIC TAGS: charged particle, asymptotic solution, distribution function

ABSTRACT: The object of this article is to provide the foundation of a general method for the asymptotic solution in statistical mechanics of classical systems allowing the handling of both Coulomb and short range forces. A system of N particles of m different kinds contained in a volume V with a binary potential acting between the particles is considered. The method of Bogolyubov is followed in defining the functions

$$F_{a_1 \dots a_N}(q_1 \dots q_N) = V^N \int \dots \int D_N dq_{1+1} \dots dq_N$$

where D_N is the Gibbs function and the q_i are the position coordinates of the i th particle. An equation for the F functions involving functional derivatives of the functional

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ACC NR: AP6031191

$$L_N(u_1 \dots u_m) = \int \dots \int D_N \prod_{\substack{1 \leq b' \leq m \\ 1 \leq l \leq N_{b'}}} \left(1 + \frac{V}{N_{b'}} \cdot u_{b'}(q_l) \right) dq_1 \dots dq_N$$

defined on a suitably restricted class of functions u is obtained. By means of this equation, functional expansions for the F functions are obtained. Solutions for the low order terms in these functional expansions are presented. The final result contains purely Coulomb terms and terms in the short range potential to the second order. The question of the mathematical foundation of these procedures is not considered. In conclusion, the author thanks N. N. Bogolyubov for discussing the results. Orig. art. has: 59 formulas.

SUB CODE: 12,20/

SUBM DATE: 30Dec65/

ORIG REF: 015/

OTH REF: 003

Card 2/2 *eq 12*

135-58-8-19/20

AUTHOR: Strel'tsova, Ye. M., Head of the Technical Information Section

TITLE: The Sverdlovsk Regional Conference on Gas-Flame Metal Working and Electric-Gas Processes (Sverdlovskoye oblastnoye soveshchaniye po gazoplamennoy obrabotke metallov i elektrogazovym protsessam)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 8, pp 46 - 47 (USSR)

ABSTRACT: A regional Conference on work done in the field of gas-flame metal working and electric-gas processes was convened at Sverdlovsk from May 14 - 16 by VNIIAvtogen, together with the welding section of the Sverdlovsk NTO section of Mashprom, the Ural House of Engineering and the Technical Administration of the Sverdlovsk sovnarkhoz. About 200 representatives from Sverdlovsk enterprises and other Ural and Siberian sovnarkhozes were present. The Conference was opened by S. I. Kikhaylov, Candidate of Technical Sciences, with an introductory report on problems relating to the improvement of gas-flame working of metals and new efficient processes connected with industrial reorganization. The Conference then heard the following reports: I.A. Antonov, Candidate of Technical Sciences, on the state of gas-flame working in the USSR and

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The Sverdlovsk Regional Conference on Gas-Flame Metal Working and Electric-Gas Processes

abroad; S. G. Guzov, Engineer, on new machines and equipment for oxygen cutting; I. V. Speshkov, engineer, on the application of gas-flame metal working at Uralmashzavod; I. S. Shapiro, engineer, on new methods of metal cutting; Yu. A. Maslov, engineer, on air-arc metal cutting; G. V. Chepushtanov, engineer, on work done in the field of gas-flame metal working at Uralkhimmashzavod; V. K. Deykun, engineer, on a "UGV" device for hardening small-module gears; G. V. Proskuryakov on manual and machine oxygen cutting; G. A. Asinovskaya, engineer, on automation of gas-flux welding; B. V. Konopka, engineer, on oxygen-flux and oxygen-sand cutting; Ye. V. Antoshin, engineer, on plastic, ceramic and metal coating; V. V. Bykov, chief

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54135-58-8-19/20

The Sverdlovsk Regional Conference on Gas-Flame Metal Working and Electric-Gas Processes

technologist, on new equipment produced by the first Moscow Autogenous Plant; V. Ye. Kuryshv on new generator and kerosene-cutter designs. The Conference decided to take measures to develop gas-flame metal working.

ASSOCIATION: VNIIAvtogen

1. Welding--Conference

Card 3/3

SOV/137-58-10-21807

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 193 (USSR)

AUTHORS: Strel'tsova, Ye. M., Petrashen', V. I.

TITLE: Coprecipitation in the System: Basic Dye - Metallic Ion -
Halogenide (Soosazhdeniye v sisteme: osnoynoy krasitel' - ion
metalla - galogenid)

PERIODICAL: Tr. Novocherk. politekh. in-ta, 1958, Vol 69/83, pp 153-154

ABSTRACT: To 200 cc of acidulated (0.1N HCl or H₂SO₄) solution contain-
ing 1 - 5 γ Cu are added: NH₄SCN (up to 0.02 mole/l) or
NH₄I (up to 0.033 mole/l) and drop by drop, with stirring,
20 cc of 1% solution of methyl violet. After 30 min the precipi-
tate is filtered off, washed, and incinerated at 450°C. The
precipitation of Cu is 97 - 100% complete. Fe³⁺, Cd²⁺, Ni²⁺,
Ag⁺, Zn²⁺, Sb³⁺, and Sn²⁺ are precipitated together with Cu.
Cu does not precipitate in the presence of oxidizers.

1. Copper---Precipitation 2. Complex ions---Precipitation P. K.
3. Methyl violet---Applications

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