

LAPINA, E. A.

24(0); 5(4); 6(2) PHASE I BOOK EXPLOITATION SOV/2215

Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni D.I. Mendeleeva

Referaty nauchno-issledovatel'skikh rabot; sbornik No. 2 (Scientific Research Abstracts; Collection of Articles, No. 2) Moscow, Standartgiz, 1956. 139 p. 1,000 copies printed.

Additional Sponsoring Agency: USSR, Komitet standartov, mer i izmeritel'nykh priborov.

Ed.: S. V. Reshetina; Tech. Ed.: M. A. Kondrat'yeva.

PURPOSE: These reports are intended for scientists, researchers, and engineers engaged in developing standards, measures, and gauges for the various industries.

COVERAGE: The volume contains 126 reports on standards of measurement and control. The reports were prepared by scientists of institutes of the Komitet standartov, mer i izmeritel'nykh priborov pri Sovete Ministrov SSSR (Commission on Standards, Measures, and Measuring Instruments under the USSR Council of Ministers). The participating institutes are: VNIIM - Vsesoyuznyy nauchno-issledovatel'skiy metrologii imeni D.I. Mendeleeva (All-Union Scientific Research Institute of Metrology, imeni D.I. Mendeleev) in Leningrad; Sverdlovsk branch of this institute: VNIIM - Vsesoyuznyy nauchno-issledovatel'skiy institut Komiteta standartov, mer i izmeritel'nykh priborov (All-Union Scientific Research Institute of the Commission on Standards, Measures, and Measuring Instruments), created from MOIMIP - Moskovskiy gosudarstvennyy institut mer i izmeritel'nykh priborov (Moscow State Institute of Measures and Measuring Instruments) October 1, 1955; VNIIT - Vsesoyuznyy nauchno-issledovatel'skiy inzhenerno-tekhnicheskikh i radiotekhnicheskikh nauchnykh institutov (All-Union Scientific Research Institute of Engineering, Technical, and Radio-engineering Institutes) in Moscow; KhIMIP - Kharkovskiy gosudarstvennyy institut mer i izmeritel'nykh priborov (Kharkov State Institute of Measures and Measuring Instruments); and MOIMIP - Novosibirskiy gosudarstvennyy institut mer i izmeritel'nykh priborov (Novosibirsk State Institute of Measures and Measuring Instruments). No personalities are mentioned. There are no references.

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Card 16/27

SOV/115-585-18/36

AUTHOR: Gordov, A.N. and Lapina, E.A.

TITLE: A Method of Computing Permissible Errors of Technical Optical Pyrometers (O metodike podscheta dopustimyykh pogreshnostey tekhnicheskikh opticheskikh pirometrov)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 5, pp 40-42 (USSR)

ABSTRACT: Errors arise from the critical values of the instrumental errors of the pyrometer itself and the error limits of the device used to graduate and check the pyrometer, in this case a reference temperature tube. The paper deals with changes in PS-2 and NS-13 absorption glass pyrometers, where, both errors being of a random nature, the end value is determined by the sum of the squares:

$$\sigma \sqrt{\sigma_1^2 + \sigma_2^2}$$

Detailed analysis showed that the average quadratic reproduction error (σ) on the international temperature scale, with the help of a II-order reference

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SOV/115-5-5-18/36

A Method of Computing Permissible Errors of Technical Optical
Pyrometers

temperature tube, can be characterized by the following values: at 900°C $\sigma = \pm 2^\circ\text{C}$, at 1400°C $\sigma = \pm 0.2^\circ\text{C}$ at 2000°C, $\sigma = \pm 4^\circ\text{C}$. The author concludes that the permissible errors - established via norms - of the technical-optical pyrometers must be evaluated as the sum of absolute values of the nominal error limits of the instrument and twice the average quadratic error which arise through inaccuracy in the international temperature scale and which must be evaluated with the help of a standard emitter used in checking the pyrometer.

Card 2/2

SOV/58-59-8-18975

Translated from: Referativnyy Zhurnal Fizika, 1959, Nr 8, p 273 (USSR)

AUTHORS: Gordov, A.N., Kirenkov, I.I., Lapina, E.A.

TITLE: Comparing Color Temperature Tubes by the Photoelectric Method

PERIODICAL: Tr. Vses. n.-i. in-ta metrol., 1958, Nr 35(95) pp 27-35

ABSTRACT: The authors describe the construction in the Khar'kov State Institute of Measures and Measuring Instruments of the "SPK-1" photoelectric apparatus, which permits a comparison of temperature tubes by an objective zero method. The device's threshold of contract sensitivity is, on the average, 10 to 15 times lower than in the case of visual measurements. Three groups of temperature tubes were set up for the 1,400° - 1,800°, 1,900° - 2,500° and 2,500° - 2,800°C ranges respectively. These tubes were intended for the maintenance and re-production of the color temperature scale. The first and second groups included reference tubes (RT) and first-class and second-class sample tubes (ST). RT were absent from the third group. The RT, as well as the first-class ST of the third group, were visually calibrated with the aid of a spectral pyrometer. The calibration was corrected by

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SOV/58-59-8-18975

Comparing Color Temperature Tubes by the Photoelectric Method

comparing the tubes with one another on the SPK-1. A series of first-class and second-class ST were calibrated on the SPK-1 in conformity with these tubes. An experimental investigation of the accuracy of working with the SPK-1 showed that the root-mean-square error of comparing the tubes amounts to about $\pm 1^\circ$, $\pm (2 - 2.5)^\circ$ and $\pm (4 - 8)^\circ\text{C}$ for the temperature ranges of the first, second and third groups respectively. The uniformity of calibration of the second-class ST amounts to $\pm 2^\circ$, $\pm 4^\circ$ and $\pm (6 - 10)^\circ\text{C}$ for the first, second and third groups respectively.

Ye. Antropov

Card 2/2

SOV/58-59-8-18967

Translated from: Referativnyy Zhurnal Fizika, 1959, Nr 8, p 272 (USSR)

AUTHOR: Lapina, E.A.

TITLE: The Application of an Arc Radiator for the Checking of Optical Pyrometers Above 2,000°C

PERIODICAL: Tr. Vses. n.-i. in-ta metrol., 1958, Nr 35 (95), pp 70-79

ABSTRACT: A three-electrode carbon arc operating on direct current is described for use as a standard source for calibrating optical pyrometers intended for the measurement of temperatures in the 2,000° - 3,200°C range. The following points are discussed: the selection of corrective light filters (which are necessary so that the radiator will be similar to a black body as regards the properties of its radiation), the calibration of the arc radiator to brightness temperatures and the application of the radiator to the calibration and checking of optical pyrometers. It is noted that the greatest virtue of using an arc radiator is the simplification and hastening of the process of checking, as well as the heightening of its reliability.

A.G. Sviridov

Card 1/1

BOYARSKIY, L.A.; GORDOV, A.N.; IOSEL'SON, G.L.; KANDYBA, V.V.; KIRENKOV,
I.I.; KOVALEVSKIY, V.A.; KRAKHMAL'NIKOVA, G.A.; LAPINA, E.A.;
TARAYANTS, K.G.

Using the photoelectric method for precise work in the field of
optical pyrometry. Trudy VNIIM no.36:23-32 '58. (MIRA 11:11)
(Pyrometry)

9(9)

SOV/115-59-4-20/27

AUTHORS: Kirenkov, I.I. and Lapina, E.A.

TITLE: A New Method of Determining the Effective Wave Length of Visual and Photoelectric Brightness Pyrometers (Novyy metod opredeleniya effektivnykh dlin voln vizual'nykh i fotoelektricheskikh yarkostnykh pirometrov)

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 4, pp 37-39 (USSR)

ABSTRACT: When calibrating and checking brightness pyrometers by a radiator which is not a black body, the knowledge of the effective wave length is required for considering the spectral characteristic of the radiator. Presently, new types of series and experimental, visual and photoelectrical pyrometers are being used. For operating these instruments, it is necessary to create simple and reliable methods of measuring the effective wave length. The existing methods of measuring the effective wave length have a number of disadvantages. Therefore, the authors suggest a new method. Two light filters are selected

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A New Method of Determining the Effective Wave Length of Visual and Photoelectric Brightness Pyrometers

ted, one increases and the other decreases the light temperature of the radiation source. The spectral curves of the light filters must intersect each other at a wave length which is close to the effective wave length of the pyrometers under investigation. The authors present equations for this method and consider the possible errors. Light filters satisfying the requirements for this application may be manufactured of colored glass PS-9 and SZS-17, whereby the first brand increases and the second one decreases the light temperature of a tungsten band lamp. Finally, the authors consider experimental results, obtained with this method when checking pyrometers OPK, FP-3, "Fotopir" S-1, and when selecting photo elements for the FEP-3 TsIA pyrometers. There is 1 graph.

Card 2/2

LAPINA, N.N.

Studies of the marine geology in the Arctic during 1959.
Inform. biul. NIIGA no.17:58-62 '59. (MIRA 13:11)
(Arctic regions--Submarine geology)

PHASE I BOOK EXPLOITATION

SOV/4940

Gordov, A. N., I. I. Kirenkov, E. A. Lapina, and N. N. Ergardt

Metody izmereniya vysokikh temperatur (High Temperature Measuring Methods) Moscow, Standartgiz, 1960. 52 p. 3,000 copies printed. (Series: Vsesoyuznyy nauchno-issledovatel'skiy institut komiteta standartov, mer i izmeritel'nykh priborov. Seriya obzornykh monografiy po izmeritel'noy tekhnike, vyp. 12)

E.: V. I. Startsev; Ed. of Publishing House: M. I. Kuznetsova;
Tech. Ed.: A. Ye. Matveyeva.

PURPOSE: This book is intended for technical personnel concerned with the application of modern pyrometric techniques.

COVERAGE: The book describes the methods and equipment of both radiation and optical pyrometry; a special chapter is devoted to color pyrometry. Visual and photoelectric methods of measuring high temperatures by means of pyrometers, as well as methods of checking all types of pyrometers, are investigated. Description is

Card 1/4

GORDOV, A.N.; IZRAILOV, K.S.; KANDYBA, V.V.; KIRENKOV, I.I.;
KOVALEVSKIY, V.A.; LAPINA, E.A.; FINKEL'SHTEYN, V.Ye.;
ERGARDT, H.H.

Metrological research for creating methods and equipment for
precise measurement of high temperatures. Izv. tekh. no. 1:22-25
Ja '61. (MIRA 14:1)

(Pyrometry)

LAPINA, E. A.

Methods for testing the effect of the brightness level of a radiation source on the readings of color pyrometers. Trudy inst. Kom. stand., mer i izm. prib. no.51:221-223 '61.
(MIRA 16:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im. D. I. Mendeleyeva.

(Pyrometers--Testing)

KIRENKOV, I.I.; LAPINA, E.A.

Calculating color temperature by the Planck formula. Trudy inst.
Kom.stand.mer i izm.prib. no.71:91-93 '63.

(MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im.
D.I. Mendeleyeva.

LAPINA, E.A.

Methods and equipment for the establishment of the international operating temperature scale by means of infrared radiation. Trudy inst.Kom.stand.mer i izm.prib. no171:62-70 1963.

Using the infrared spectropymeter for determining the spectral coefficient of blackness radiation of some kinds of oxide cathodes. Ibid.:153-158 (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im. D.I. Mendeleeva.

1 6815-65 EWG(j)/EWT(l)/EWG(x)/EWT(m)/EPA(sp)-2/EPF(c)/EPP(n)-2/EPR/T/EWA/
EWP(q)/EWP(b) Pr-4/Ps-4/Pa-4/Pa-6/Pab-2h IJP(c)/ASD(f)/AS(wp)-2/AFMDC/
AEDG(b)/RAEM(a)/AFWL/ESD(t)/RAEM(t) AT/RWH/JD 8/0048/84/028/008/1367/1372
ACCESSION NR: AP4044655

AUTHOR: Lapina, E.A.; Parkhomenko, V.S.; Chistyakova, N.A. 112

TITLE: Use of color pyrometry for measuring the temperature of oxide-coated cathodes /Report, Third All-Union Conference on Semiconductor Compounds held in Kishinev 16-21 Sep 1963/

SOURCE: AN SSSR. Izv. Seriya fizicheskaya, v.28, no.8, 1964, 1367-1372

TOPIC TAGS: oxide cathodes, temperature measurement, pyrometry, infrared pyrometer 10

ABSTRACT: The feasibility of employing infrared (0.9 to 2.2 μ) color pyrometry to measure the temperatures of oxide-coated cathodes in the temperature range from 600 to 900°C was investigated experimentally. Oxide coatings of commercial type and thickness from 50 to 120 microns were deposited on 0.54 cm diameter 15 cm long nickel or molybdenum cylinders of 50 microns wall thickness. Each cylinder was provided with a 1.5 to 2 mm diameter opening in the wall midway between the ends for pyrometric observation of the interior temperature. The emissivity of this opening was corrected for the finite size of the opening and the cylinder by a formula given by J.C.De-Vos (Physica Deel, 20, No. 10, Oct. 1954, 691). The model cathode was heated

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ACCESSION NR: AP4044655

by regulated direct current in vacuum (10^{-6} mm Hg) and observations were made with an infrared spectropyrrometer calibrated in brightness temperature. Correction was made for reflection by the glass wall of the vacuum chamber. The temperature within the cathode was determined from the brightness temperature of the radiation issuing from the opening, from the color temperature of this radiation, and by means of a thermocouple located within the cylinder but not in contact with the wall. The relative emissivity (with respect to a black body at the temperature of the interior of the cathode) of the oxide surface was measured at five wavelengths between 0.9 and 2.2 μ , and the results are tabulated for six different cathodes. The relative emissivities range from 0.15 to 0.42, but they do not vary greatly with wavelength for a single cathode. The color temperatures and the brightness temperatures of the oxide surfaces are compared with the true interior temperatures. The color temperatures differed from the true interior temperatures by only a few degrees, the deviation exceeding 10° in only one case. The brightness temperatures were typically 150 to 200 $^\circ$ lower than the true interior temperatures. It is concluded that the oxide coating is sufficiently transparent and has a sufficiently low emissivity that the measured color temperature corresponds to the temperature of the hottest region next to the base, and that the base temperature can be reliably determined by infra-

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red color pyrometry. The surface temperature can be calculated from the base temperature and the heat conductivity, transparency, and thickness of the coating, but it cannot be determined from the quality of the radiation. To determine the applicability of the method to the measurement of the temperature of other types of cathode coatings, a similar investigation with each different type of coating will be required. Orig.art.has: 7 formulas and 3 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: EC,EM

NR REF SOV: 003

OTHER:001

3/3

KIRINKOV, I.I.; LAPINA, E.A.

Methodology and apparatus for measuring the effective wave-
lengths of color pyrometers. Nov. nauch.-issl. rab. po metr.
VNIIM no.3:33-36 '64 (MIRA 18:2)

LAPINA, E.A.

Emitters for the reproduction of color temperature in the infrared
spectrum region. Izv. tekhn. no.3:31-33 Mr '65. (MIRA 18:5)

I 4082-66 EMT(1)/EMT(m)/EPF(c)/EPF(n)-2/ENG(m)/EPA(w)-2/T/EWP(t)/EWP(b)
 ACCESSION NR: AP5025981 LJP(c) JD/AT UR/0294/65/003/005/0686/0690
 44.65 535.344 57
 48
 8

AUTHOR: Lapina, E. A.; Chudnovskiy, F. A. 44.55

TITLE: The spectral emissive power of an oxide cathode 27 2,44,55

SOURCE: Teplofizika vysokikh temperatur, v. 3, no. 5, 1965, 686-690

TOPIC TAGS: emission spectrum, radiation pyrometer, optic coating, carbonates

ABSTRACT: It has been shown that radiation from the base layer of an oxide cathode is weakly absorbed and strongly dispersed by the grains of the oxide coating; thus, pyrometric measurements do not give the true temperature of the emitting surface. The work described in this article is intended to verify the following formula, on the assumption that absorption of radiation within the grains of the coating can be disregarded in comparison with dispersion within the grains:

$$e_{\lambda} = \frac{2n^2}{[2\gamma_{\lambda}h + (1+r)/(1-r) + (1+p)/(1-p)]} \quad (1)$$

where e_{λ} is the spectral emissive power; n is the index of refraction

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of the porous oxide; γ_λ is the dispersion coefficient of the radiation in the oxide layer, depending on radiation wave length and density of the layer; h is the thickness of the oxide layer; r is the reflection coefficient of the radiation from the core-oxide surface; and ρ is the reflection coefficient of the radiation falling from without on the surface of the oxide. To verify this formula, an investigation was made of the spectral emissive power of oxide layers of different thickness and density deposited on a nickel core in the wave length interval 0.65—2.2 microns. The coatings, consisting of a triple carbonate with the ratio $\text{BaCO}_3:\text{SrCO}_3:\text{CaCO}_3$ equal to 49:42:9, were applied by pulverization (average density of carbonate 1.3 gram/cm³) and cataphoresis (average density 2.13 gram/cm³). Dissociation of the carbonates was carried out by heating in vacuum for 1—1.5 hr to 1000C; the core was then heated further for 5—6 hr at 800C. The emissive power was calculated by the formula:

$$\ln \epsilon_\lambda = \frac{\lambda}{c_2} \left(\frac{1}{T} - \frac{1}{S} \right), \quad (2)$$

where λ is the wave length of the radiation; T is the true tempera-

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ture of the sample; S is the brightness temperature of the sample; and, c_2 is the second universal constant in the Planck radiation law. The brightness temperature in the spectral interval 0.9—2.2 microns was measured with an IKP-57 spectropyrrometrical unit, and was measured at a wave length of 0.65 microns with a standard optical pyrometer AP-1. The temperature drop over the sample did not exceed 3° at a working temperature of 1100K. Results are exhibited graphically and show satisfactory agreement with the theoretical formula. "The authors express their thanks to B. Ya. Moyzhes for his direction and to A. G. Blokh for the data presented on the dispersion of light in spheres." Orig. art. has: 4 formulas and 5 figures. [06]

ASSOCIATION: Institut poluprovodnikov Akademii nauk SSSR (Semiconductor Institute, Academy of Sciences, SSSR) *44.55*

SUBMITTED: 27Feb65

ENCL: 00

SUB CODE: EM, DP

NO REF SOV: 006

OTHER: 003

ATD PRESS: 4/27

RVP
Card 3/3

LAPINA, F. Kh.

LAPINA, F. Kh.; MERTSALOV, Ye. N.

Outbreak of epidemic hepatitis in student dormitories; preliminary
report. Vop. virus. 1 no. 6:41-43 N-D '56 (MIRA 11:3)

1. Kazakhskiy institut epidemiologii, mikrobiologii i gigyeny,
Alma-Ata.

(HEPATITIS, INFECTIOUS, epidemiol.
in Russia, outburst in student home)

LAPINA, G.G., polkovnik meditsinskoy sluzhby; TERTITSA, Ye.Ye. (Kiyev)

Dependence between various protein fractions of the blood and the
erythrocyte sedimentation reaction. Vrach.delo no.10:1099-1101 '59.
(MIRA 13:2)

(BLOOD PROTEINS)

(ERYTHROCYTES)

LAPINA, G.G., polkovnik meditsinskoy sluzhby (Kiyev)

Significance of colibacillosis in the etiology of acute gastro-intestinal diseases. Vrach. delo no.4:111-113 Ap '61.

(MIRA 14:6)

(ESCHERICHIA COLI)

(DIGESTIVE ORGANS--DISEASES)

LAPINA, G.G. (Kiyev); GORODETSKIY, M.M. (Kiyev); LAZARETNIK, A.Sh. (Kiyev);
KOVBASKO, M.A. (Kiyev)

Diagnostic significance of the determination of C-reactive protein
in some diseases of the liver. Vrach. delo no.6:26-28 Je '61.
(MIRA 15:1)

(BLOOD PROTEINS) (LIVER DISEASES)

TERNAVSKIY, A.V.; KRINITSKIY, A.F.; LAPINA, G.G. (Kiyev)

Clinical evaluation of probeless determination of gastric secretion.
Vrach. delo no.6:42-45 Je '61. (MIRA 15:1)
(STOMACH SECRETIONS)

PODMOSHENSKIY, I.V.; LAPINA, G.N.

Erosion of metallic electrodes in a low-voltage arc. Fiz.
sbor. no.4:262-265 '58. (MIRA 12:5)

1. Gosudarstvennyy ordena Lenina opticheskii institut imeni
S.I.Vavilova.

(Electrodes)

(Electric arc)

LAPINA, G.N.; ZAKHAR'YEVSKIY, A.N.

Cover-glasses for microscope slides. Opt.-mekh.prom. [25] no.3:17-20
Mr '58. (MIRA 11:9)

(Microscopy)

LAPINA, I.

Ecology of mouse-like rodents and the basis of the fight against them under Latvian conditions. p. 163.

BIOLOGICHESKAJA MANKA; SELSKUMU L LESKUMU KROZIMISTVU. (Latvijas PSR Zinatnu akademijs. Biologijas zinatnu nodala) Riga, Latvia, No. 3, 1957.

Monthly list of East European Accessions (MEAI), IC, Vol. 8, No. 8, August 1959.
Uncla.

LAPINA, I. (Riga)

Contamination of *Clethrionomys glareous* Schreb with ectoparasites having epidemiological and epizootologic significance in different biotopes. Vestis Latv ak no.12:105-108 '60. (EEAI 10:9)

1. Latvijas PSR Zinatnu akademijs, Biologijas instituts.

(*Clethrionomys glareolus*) (Parasites)

BIRYUKOV, D.A., otv. red.; ABULADZE, K.S., red.; DANILOV, I.V., red.;
KUDRYAVTSEVA, N.N., red.; KOSTENETSKAYA, N.A., red.; LAPINA,
I.A., red.; MURAV'YEVA, N.P., red.; KHANANASHVILI, M.M.,
red.; ZIMKINA, A.M., red.; KHARASH, G.A., tekh. red.

[Some problems of modern physiology; a collection of papers dedicated to the 70th birthday and 45th anniversary of the scientific activity of the Honored Scientist, Professor Petr Stepanovich Kupalov, member of the Academy of Medical Sciences of the U.S.S.R.] Nekotorye voprosy sovremennoi fiziologii; sbornik, posviashchennyi 70-letiiu so dnia rozhdeniia i 45-letiiu nauchnoi deiatel'nosti deistvitel'nogo chlena AMN SSSR zasluzhennogo deiatelia nauki professora Petra Stepanovicha Kupalova. Leningrad, Medgiz, 1959. 262 p. (MIRA 15:8)

1. Institut eksperimental'noy meditsiny Akademii meditsinskikh nauk SSSR (for Biryukov, Abuladze).

(KUPALOV, PETR STEPANOVICH, 1889?-)
(PHYSIOLOGY)

LAPINA, I.A.

Phenomena of irradiation of stimulation in the saliva secreting center.
Fiziol.zhur. 39 no.3:275-278 My-Je '53. (MLRA 6:6)

1. Fiziologicheskij otdel im. I.P. Pavlova Instituta eksperimental'noy
meditsiny Akademii meditsinskikh nauk SSSR. (Nervous system) (Saliva-
vary glands)

LAPINA, I. A.

"Interrelationships Between Chemical (Oral) and Acoustic Analysors as an Example of Conditioned Inhibition." Cand Med Sci, Inst of Experimental Medicine, Acad Med Sci USSR, Leningrad, 1954. (RZh Biol, No 1, Jan 55)

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

LAPINA, I.A.

Formation of a conditioned salivary reflex following unconditioned complex reinforcement. Fiziol. zhur. 40 no.6:681-683 N-D '54.

(MLRA 8:2)

1. Fiziologicheskiy otdel im. I.P.Pavlova Instituta eksperimental'noy meditsiny, Leningrad.

(REFLEX, CONDITIONED,
unconditioned reinforcement)

LAPINA, I. A.
USSR/Medicine - Physiology

FD-2548

Card 1/1 Pub. 17-1/23

Author : Lapina, I. A.

Title : Variation in the latent period of unconditioned secretion after
 the disappearance of reinforced conditioned reflexes

Periodical : Byul. eksp. biol. i med. 5, 3-4, May 1955

Abstract : Investigated variations in the latent period of unconditional
 salivary secretion in dogs after the reestablishment, at
 various intervals of time, of reinforced conditioned reflexes
 which had disappeared. Graphs. Five references, all USSR
 (3 since 1940).

Institution : Physiology Department imeni I. P. Pavlov (Head - P. S. Kupalov
 Member of the Academy of Medical Sciences USSR) Leningrad

Submitted : June 15, 1954 by P. S. Kupalov, Member of the Academy of Medical
 Sciences USSR

USSR/Human and Animal Physiology. The Nervous System.

V

Abs Jour: Ref. Zmur-Biol., No 6, 1958, 27431.

Author : I.A. Lapina.

Inst : The Institute of Experimental Medicine of the
Academy of Medical Sciences of the USSR.

Title : Analysis of the Emergence of a Local Focus of
Static Excitation in the Chemical (Stomatic)
Analysor)

Orig Pub: Yezhegodnik. In-t eksperim. med. Akad. med. nauk
SSSR, 1955, Leningrad, 1956, 46-48.

Abstract: Unilateral, chronic (for a period of months)
application of a 1/3 N solution of HCl to a
portion of the posterior third of a dog's tongue,
isolated by the Abuladze technique, led to an
increase in positive conditioned reflexes and the

Card : 1/2

USSR/Human and Animal Physiology. The Nervous System.

V

Abs Jour: Ref. Zhur-Biol., No 6, 1958, 27431.

disinhibition of conditioned inhibition on the side stimulated, which lasted for 3 to 4 weeks after the cessation of stimulation. When excitability was unilaterally augmented by this means, stimulating the opposite side of the tongue 12 to 20 times produced the former effect, and only then did conversion occur, i.e., increased salivation from the gland analogous to that of the stimulated side of the tongue.

Card : 2/2

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LAPIHA, I.A.

Formation of conditioned inhibition to a unilateral conditioned reflex. Zhur.vys.nerv.deiat. 6 no.1:121-126 Ja-F' 56. (MIRA 9:7)

1. Fiziologicheskii otdel imeni I.P.Pavlova IEN AMN SSSR.
(REFLEK, CONDITIONED
conditioned inhib. to unilateral conditioned reflex (Rus))

EXCERPTA MEDICA Sec.2 Vol.10/8 Phy.Biochem. Aug 57

3479. LAPINA I.A. *Duration of the inhibitory after-effect after extinction of unilateral conditioned reflexes (Russian text) Ž. VYŠČ. NERV. DEJATEL. 1956, 6/2 (292-296) Tables 3

Experiments were performed on dogs in which small cuts of the tongue were bilaterally drawn out and sutured to the skin. In these dogs salivary acid-conditioned reflexes to various sound stimuli, reinforced by moistening the cut of the tongue by N/3 HCl solution, were established; some stimuli were reinforced at the left and other stimuli at the right cut of the tongue. When one of these stimuli was not reinforced by acid in many successive trials during the same experimental session i.e. when the conditioned reflex to it was extinguished, it was found that the conditioned reflex to other stimuli reinforced usually at the same side disappeared also and the unconditioned reflex was diminished. This inhibitory after-effect lasted 6-8 hr. and the full recovery took place only after 24 hr. At the same time the conditioned reflex to stimuli reinforced usually at the contralateral part of the tongue was normal or only slightly diminished.

Wyrwicka - Warsaw

LAPINA, I. A.

EXCERPTA MEDICA Sec.2 Vol.10/4 Physiology, etc. Apr 57

1808. LAPINA I. A. Dept. of Physiol., Inst. of Exp. Med., Leningrad. *Relationship between conditioned reflexes based on responses to food and to acid obtained from different sites of unconditioned stimulation (Russian text) FIZIOL. Z. 1956, 42/10 (838-843) Tables 3

In 2 dogs, after formation of a conditioned reflex to food from the mouth surface, a conditioned reflex to acid was obtained from the opposite side of the tongue. These 2 different conditioned reflexes did not inhibit one another.

Simonson - Minneapolis, Minn.

Country : USSR
Category= : Human and Animal Physiology, The Nervous System T
Abs. Jour. : Ref Zhur Biol, No. 2, 1959, No. 8503
Author : Lapina, I.A.
Institut. :
Title : Rest (Latent) Excitation.

Orig. Pub. : Byul eksperim. biol. i med., 1957, 43, No. 1,
11--13

Abstract : Unilateral conditioned salivation responses to stimulation of one side of the tongue were established in 3 dogs with parts of the tongue exposed. The increased excitability of the parotid gland did not disappear immediately, but was manifest for some time (7--8hours) when the conditioned stimulus was first applied and referred to the opposite side in the manner of conditioned and unconditioned reflex reactions. It is suggested that rest (latent) excitation is maintained for some time in the corresponding cerebral hemisphere, lasting unilaterally in the cortical portion of the chemical (oral) analyzer.

Card:

GAVRILOVA, L.N., LAPINA, I.A.

Duration of the preservation of a residual irritation focus in a chemical (oral) analyzer of a dog [with summary in English]. Zhur.vys.nerv. deiat. 8 no.3:379-383 My-Je '58 (MIRA 11:8)

1. Fiziologicheskii otdel im. I.P. Pavlova Instituta eksperimental'noy meditsiny ANN SSSR.

(MOUTH, physiology,

duration of residual irritation to chem. stimuli in dogs (Rus))

KUPALOV, Petr Stepanovich, prof., otv.red.; GOLIKOV, N.V., red.; KASATKIN, N.I., red.; KARAMYAN, A.I., red.; LAPINA, I.A., red.; VASIL'YEVA, Z.A., red.; RUBLEVA, M.S., tekhn.red.

[Problems in the physiology and pathology of the higher nervous activity; successes and prospects for development] Problemy fiziologii i patologii vysshei nervnoi deiatel'nosti; dostizheniia i perspektivy razvitiia. Pod obshchei red. P.S.Kupalova. Leningrad, Gos.izd-vo med.lit-ry Medgiz, Leningr.otd., 1960. 238 p.

(MIRA 13:12)

1. Akademiya meditsinskikh nauk SSSR. Moscow. 2. Deystvitel'nyy chlen AMN SSSR (for Kupalov).

(NERVOUS SYSTEM)

LAPINA, I.A.

Differentiation of chemical substances by the gustatory analyzer
in dogs under conditions of food reinforcement. Zhur. vys. nerv.
deiat. 10: no. 5:742-746 S-0 '60. (MIRA 13:12)

1. Fiziologicheskiy otdel im. I.P. Pavlova Instituta eksperimental'noy
meditsiny Akademii meditsinskikh nauk SSSR.
(GLOSSOPHARYNGEAL NERVE) (TASTE) (CONDITONED RESPONSE)

LAPINA, I.A.

Differentiation of homogenous acoustical and chemical stimuli,
differing according to the side of the action. Zhur. vys. nerv.
deiat. 10 no.2:258-261 Mr-Ap '60. (MIRA 14:5)

1. Pavlov Physiology Department, Institute of Experimental Medicine,
U.S.S.R. Academy of Medical Sciences, Leningrad.
(CONDITIONED RESPONSE)

LAPINA, I.A.

Effect of a distinct excitation focus on the summation of excitations
in salivary centers. Fiziol.zhur. 46 no.6:712-717 Je '60.

(MIRA 13:8)

1. From the Pavlov physiological department, Institute of Experi-
mental Medicine, Leningrad.

(SALIVARY GLANDS)

(REFLEXES)

LAPINA, I.A.

Reactions of lacrimal and salivary glands to specific and nonspecific stimuli. Fiziol. zhur. 47 no.4:483-486 Ap '61. (MIRA 14:6)

1. From the Pavlov Physiology Department, Institute of Experimental Medicine, Academy of Medical Sciences, Leningrad.
(SALIVARY GLANDS) (LACRIMAL ORGANS)

LAPINA, I.A.

Effect of aminazine on the course of unilateral conditioned reflexes.
Zhur.vys.nerv. deiat. 11 no.2:260-264, Mr-Ap '61. (MIRA 14:6)

I. Pavlov Physiology Department, Institute of Experimental Medicine,
U.S.S.R. Academy of Medical Sciences, Leningrad,
(CONDITIONED RESPONSE) (CHLORPRIMAZINE)

LAPINA, I.A.

Lacrimal secretion following stimulation of the conjunctiva of the eye and the mucosa of the oral cavity. Fiziol. zhur. 48 no.1:72-75 Ja '62. (MIRA 15:2)

1. From I.P.Pavlov's Physiological Department Institute of Experimental Medicine, Leningrad.
(LACRIMAL ORGANS) (CONJUNCTIVA) (MOUTH)
(MUCOUS MEMBRANE)

BIRYUKOV, Dmitriy Andreyevich, prof., otv. red.; GOLIKOV, N.V., red.;
ZIMKIN, N.V., red.; KARAMYAN, A.I., red.; KUPALOV, P.S., red.;
LAPINA, I.A., red.; VASIL'YEVA, Z.A., red.; KHARASH, G.A., tekhn.
red.

[Problems of the physiology and pathology of higher nervous activity]
Problemy fizologii i patologii vysshei nervnoi deiatel'nosti.
Pod obshchei red. D.A.Biriukova. Leningrad, Medgiz. No.2. 1963.
192 p. (MIRA 16:12)

1. Akademiya meditsinskikh nauk SSSR, Moscow. 2. Deystvitel'nyy
chlen AMN SSSR (for Biryukov).
(NERVOUS SYSTEM)

LAPINA, I.A.

Correlation of lacrimal and salivary secretions during the development of conditioned reflexes from different receptor zones. *Zhurn. vys. nerv. deiat.* 13 no.6:1047-1051 N-D '63. (MIRA 17:7)

1. Fiziologicheskiy otdel imeni I.P. Pavlova instituta eksperimental'noy meditsiny AMN SSSR.

LAPINA, I.A.

Valuable contribution to experimental neurophysiology; a review of O. Sager's book "The mesencephalon." Fiziol. zhur. 49 no.1:135-136 Ja '63. (MIRA 17:2)

1. Institut eksperimental'noy meditsiny AMN SSSR, Leningrad.

DANILOV, I.V.; KOSTENETSKAYA, N.A.; LAPINA, I.A.; MURAV'YEVA, N.P.

Petr Stepanovich Kupalov, 1888-1964. Zhur. vys. nerv. deiat. 15
no.2:195-201. Mr-Ap '65. (MIRA 18:5)

KUPALOV, P.S. [deceased]; LAPINA, I.A.

Content of sialic acid in lacrimal and salivary secretions in dogs during conditioned and unconditioned stimulations. Zhur. vys. nerv. deiat. 15 no.2:311-317 Mr-Apr '65.

(MIRA 18:5)

1. Fiziologicheskii otdel imeni I.P. Pavlova Instituta eksperimental'noy meditsiny AMN SSSR, Leningrad.

LAPINA, Iskra Armenakovna; LICHKO, A.Ye., red.

[Physiology of the lacrimal gland] Fiziologiya sleznoi
zhelezy. Leningrad, Meditsina, 1965. 161 p.
(MIRA 18:10)

GLEBOVSKAYA, Ye.A.; ZAKHAROV, A.A.; LAPINA, I.K.; KAPLAN, Z.G.

Absorption spectra of benzene in 5 - 6 region. VNIGRI no.105:
23-36. '57.

(Benzene--Spectra)

(MIRA 11:9)

LAPINA, I. V., Cand Biol Sci (diss) -- "Analysis of the profound stages of the parabiologic process". Leningrad, 1960. 14 pp (Min Educ RSFSR, Leningrad State Pedagogical Inst im Gertsen, Chair of Physiology and Anatomy), 250 copies
(KL, No 11, 1960, 130)

AUTHOR: Lapina, I.Ya.

SOV-26-58-8-36/51

TITLE: A Gigantic Iceberg in Antarctica (Gigantskiy aysberg v Antarktike)

PERIODICAL: Priroda, 1958, Nr 8, p 117 (USSR)

ABSTRACT: A gigantic table-shaped iceberg 70 km off the Shackleton shelf glacier was seen in March 1958 by members of the continental part of the third complex Antarctic expedition, AS USSR. Viewed from an aircraft the ice massif was 90 km long from east to west and 30 k wide, its height was 40 m above water. It took in an area similar to 270 square km. This was the 4th-biggest iceberg seen in the Antarctic in this century. It is thought that it broke loose from the Shackleton glacier. This was confirmed by a comparison of latest cartographic material with earlier maps. There is 1 photo.

ASSOCIATION: Sovet po antarkticheskim issledovaniyam AN SSSR /Moskva
(The Council of Antarctic Research AS USSR /Moscow)

1. Glaciers--Antarctic regions
2. Ice--Antarctic regions

Card 1/1

SOV/26-59-2-29/53

AUTHOR: Lapina, I.Ya.

TITLE: Coordination of Soviet Exploration of Antarctica
(Koordinationatsiya Sovetskikh issledovaniy Antarktiki)

PERIODICAL: Priroda, 1959, Nr 2, pp 103-104 (USSR)

ABSTRACT: In connection with the International Geophysical Year, 13 countries are studying Antarctica. For better coordination of exploratory works, the International Council of Scientific Societies created a special Committee of Antarctic Exploration (SCAR). The USSR is represented in this Committee by the deputy director of the Arkticheskiy i Antarkticheskiy institut (Arctic and Antarctic Institute) M.M. Somov. In the USSR, a special Interdepartmental Commission for the Exploration of Antarctica was created at the AS USSR, under the chairmanship of

Card 1/2

LAPINA, I.Ya.

News from Antarctica. Priroda no.6:64 Je '60.
(MIRA 13:6)

1. Mezhdunarodnaya komissiya po izucheniyu Antarktiki,
Moskva.

(Antarctic regions)

S/030/61/000/009/008/013
B105/B101

AUTHOR: Lapina, I. Ya.

TITLE: Session of the Commission for the Exploration of Antarctic

PERIODICAL: Akademiya nauk SSSR. Vestnik, no. 9, 1961, 118-119

TEXT: A systematic exploration of the Antarctic mainland was commenced by Soviet scientists five years ago. The pyataya Sovetskaya antarkti-cheskaya ekspeditsiya (Fifth Soviet Antarctic Expedition) reported on work conducted in 1960, at the session held by the Mezhdudomstvennaya komissiya po izucheniyu Antarktiki Akademii nauk SSSR (Interdepartmental Commission for the Exploration of Antarctic of the Academy of Sciences USSR) on May 24, 1961. The expedition explored the vast region between 108° east longitude and 40° west longitude extending over about 5000 km along the coast and reaching 1000 km into the interior. Scientific work was conducted in the stations "Mirnyy", "Vostok", and "Lazarev", and, for about three months, at the advanced stations "Mir", "Druzhba", and "Pobeda", and during the passage of the "Ob". The following observations

Card 1/2

Session of the Commission for the ...

S/030/61/000/009/008/013
B105/B101

were made at "Mirnyy", "Vostok", and "Lazarev": (1) Geophysical problems: magnetic phenomena, observations of the ionosphere, of aurora polaris, of cosmic rays, of earth currents, and seismological studies. (2) Aerometeorological problems: probing the upper strata of the atmosphere, actinometry, meteorological observations. (3) Glaciological problems: temperature measurements in firn, snow-drift measurements, determining the rate of ice motion. Queen Maud Land was explored from both the geographic and the geological side (among its mineral resources: rock crystal and mica). A vast portion of this territory was reproduced in geological and geomorphological maps, and aerial pictures were taken. Shelf ice was studied in particular. The island of Pobeda, discovered by the Second Soviet Antarctic Expedition was diligently explored. The 1960 expedition found it to be a transitional formation between shelf ice and an island, not an iceberg. The aerial observation service based at "Mirnyy" and "Lazarev" discovered the existence of an ice-free coastal strip. Valuable ornithological data were obtained. Several colonies of imperial penguins numbering from 3000 to 5000 were discovered in the region of the Gauss mountain. Stercorariinae were seen to migrate from east to west. The evaluation of the expedition material is being continued.

Card 2/2

LAPINA, I.Ya.

New names on map of Antarctica. Vest. AN SSSR 31 no.2:104-105 F
'61.

(Antarctic regions--Names, Geographical) (MIRA 14:2)

BUGAYEV, V.A., prof., otv. red.; SHUMSKIY, P.A., prof., red.; GUSEV, A.M.,
prof., red.; LAPINA, I.Ya., red.; MEL'NIKOVA, N.B., red. izd-va;
GOLUB', S.P., tekhn. red.

[Antarctica; reports of the commission] Antarktika; doklady komissii
1960. Moskva, Izd-vo Akad.nauk SSSR, 1961. 85 p. (MIRA 14:12)

1. Akademiya nauk SSSR. Mezhvedomstvennaya komissiya po izucheniyu
Antarktiki.

(Antarctic regions)

LAPINA, I.Ya.

A session of the Committee for Studying the Antarctic Regions.
Vest.AN SSSR 31 no.9:118-119 S '61. (MIRA 14:10)
(Antarctic regions--Russian exploration)

BUGAYEV, V.A., prof., otv. red.; SHUMSKIY, P.A., prof., red.;
GUSEV, A.M., prof., red.; LAPINA, I.Ya., red.

[Antarctics; reports of the Commission, 1963] Antarktika;
doklady komissii, 1963. Moskva, Nauka, 1964. 174 p.
(MIRA 17:11)

1. Akademiya nauk SSSR. Mezhdovedomstvennaya komissiya po
izucheniyu Antarktiki.

BUGAYEV, V.A., prof., civ. red.; SHUMSKIY, P.A., prof., red.;
GUSEV, A.M., prof., red.; LAPINA, I.Ye., red.

[The Antarctic; reports of the Commission, 1964.] Antarktika;
doklady komissii, 1964. Moskva, Nauka, 1965. (MIRA 18:11)

LAPINA, K.V.

Use of novocaine, bromine, and calcium electrophoresis in bronchial asthma in children. Vop.okh.mat. i det. 4 no.5:28-32 S-0 '59.

(MIRA 13:1)

1. Iz Klinicheskogo otdela (zav. - dotsent N.P. Savvatinskaya) Gosudarstvennogo nauchno-issledovatel'skogo pediatricheskogo instituta (dir. - kand.med.nauk A.P. Chernikova, zamestitel' direktora po nauchnoy chasti - prof. N.R. Shastin).

(ELECTROPHORESIS)

(ASTHMA)

LAPINA, K. V., Doc MED SCI, "ROLE OF ELECTROTHERAPY

Chin Health USSR.

IN CHRONIC PNEUMONIA IN CHILDREN," MOSCOW, 1961. ~~(KBR)~~

(Central Inst for the Advanced Training of Physicians)

~~KOV STATE MED INST~~. (KL, 3-61, 228).

LAPINA, Kseniya Vladimirovna; SARYLOVA, K.V., red.; MATVEYEVA, M.M.,
tekhn. red.

[Chronic pneumonia in children and the role of physical
methods in its compound treatment] Khronicheskaja pnevmo-
niia u detei i rol' fizicheskikh metodov v kompleksnom ee
lechenii. Moskva, Medgiz, 1963. 279 p. (MIRA 17:2)

L.A. LAPINA

34(7)

PHASE I BOOK EXPLOITATION

L'ov. Universitet

307/1700

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii, 1956. t. III. Atomnaya spektroskopiya (Materials of the 10th All-Union Conference on Spectroscopy, 1956. Vol. 3: Atomic Spectroscopy) Izdatel'stvo L'vovskogo univ., 1958. 568 p. (Series: Itz. Fizicheskii sbornik, vyp. 3(9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR, Komissiya po spektroskopii.

Editorial Board: G.S. Landsberg, Academician, (Resp. Ed.); B.S. Repovskii, Doctor of Physical and Mathematical Sciences; I.L. Fabelinskiy, Doctor of Physical and Mathematical Sciences; V.A. Fabrikant, Doctor of Physical and Mathematical Sciences; V.G. Koritskiy, Candidate of Technical Sciences; S.M. Rayskiy, Candidate of Physical and Technical Sciences; L.K. Klimovskaya, Candidate of Physical and Mathematical Sciences; V.S. Milyanchuk (deceased), Doctor of Physical and Mathematical Sciences; A.Ye. Glazerman, Doctor of Physical and Mathematical Sciences; M.I. S.L. Gaser, Tech. Ed.; V.V. Saranyuk.

PURPOSE: This book is intended for scientists and researchers in the field of spectroscopy, as well as for technical personnel using spectrum analysis in various industries.

COVERAGE: This volume contains 177 scientific and technical studies of x-ray spectroscopy presented at the 10th All-Union Conference on Spectroscopy in 1956. The studies were carried out by members of scientific and technical institutes and include extensive bibliographies and technical institutes and include studies cover many phases of spectroscopy: x-ray fluorescence, electro-magnetic radiation, physicochemical aspects of controlling uranium production, physics and technology of gas discharge optics and spectroscopy, abnormal dispersion in metal vapors, spectroscopy and the combustion theory, spectrum analysis of ores and minerals, photographic methods for quantitative spectrum analysis of metals and alloys, spectral determination of the hydrogen content of metals by means of isotopes, tables, and studies of spectral lines, spark spectrographic analysis, statistical study of variation in the parameters of calibration curves, determination of traces of metals, spectrum analysis in metallurgy, thermochemistry in metallurgy, and principles and practice of spectrochemical analysis.

Card 2/31

Materials of the 10th All-Union Conference (Cont.)	250
Glazerman, S.A., and Ye.D. Raykhbaum. Use of Radioactive Indicators in Spark Discharge Studies	252
Mil'tsev, M.G., Ye.A. Pitsyna, and K.I. Taganov. Some Constant Physical Characteristics of Contact Electric Spark Sampling in Spectrum Analysis	255
Rebhat, A.M., M.G. Mil'tsev, and K.I. Taganov. Effect of Secondary Components in Spectrum Analysis With Electric Sampling	257
Shayevich, A.B. Effect of Alloy Structure on the Results of Spectrum Analysis of Cast Iron	262
Podoshenakiy, I.V., and G.M. Lapina. Metal Electrode Erosion in a Low-voltage Spark	265
Filimonov, L.M. Relation of the Composition of the Sample to the Emission Cloud in Light Sources for Spectrum Analysis	265

Card 16/31

LAPINA, L. G.

"A Study of the Composition of the Population of Winter Wheat,
Liurab'l Variety, for the Purpose of Developing Methods of Improving
This Variety." Cand Agr Sci, Leningrad Agricultural Inst,
Leningrad, 1953. (RZhBiol, No 2, Sep 54)

Survey of Scientific and Technical Dissertations Defended at USSR
Higher Educational Insitituions (10)

So: Sum. No. 481, 5 May 55

FURMAN, I.Ya.; LAPINA, L.I.

Effectiveness of the use of natural gas in the cement industry.
Gaz.prom. 5 no.6:35-39 Je '60. (MIRA 13:6)
(Gas, Natural) (Cement industries)

LAPINA, L. M. Cand Chem Sci -- (diss) "Thermodynamic Study of Gaseous Selenium and ~~of~~ the Binary System Sulfur-Selenium." Moscow, 1957. 19 pp 22 cm. (Min of Chemical Industry USSR, Scientific Inst for Fertilizers and Insectofungicides im Prof~~essor~~ Ya. V. Samoylov), 110 copies (KL, 26-57, 105)

The binary system sulfur-selenium in the region of low selenium concentrations. L. M. Lapina. *Khim. Nauka i Prom.* 2, 528-7(1957).—The concn. of Se and S in the vapor was carried out by a slow current (5-8 ml./min.) of N₂.

From: 2, 626-7 (1957)
The concn. of Se and S in the vapor phase carried out by a slow current (5-8 ml./min.) of N bubbled through S contg. 0.0-1% Se⁷⁹ at 250-80° was detd. The Se content in the liquid S could thus be reduced from 1 to 0.004% by a fractionating column equiv. to 20 theoretical plates with a reflux no. of one.
I. Bencowitz

Distr: 4E4j

LAPINA, L.M.

20-5-29/60

AUTHOR
TITLE

ILLARIONOV, V.V. and LAPINA, L.M.
Association States of Selenium in the gas Phase.
(Assotsiatsionnyye sostoyaniya selena v gazovoy faze.-
Russian)

PERIODICAL

Doklady Akademii Nauk SSSR 1957, Vol 114 Nr 5,
pp 1021-1024 (U.S.S.R.)

ABSTRACT

According to a wide-spread opinion, based upon one single work on the determination of vapor density, there exist two kinds of molecules in selenium vapors: Se_2 and Se_6 which are in equilibrium with one another. However, calculations are contradictory to test results. In order to solve this problem, the authors investigated these densities by statistical methods in a quartz apparatus. The selenium investigated did not contain more than 0,004 - 0,008 % of non-volatile admixtures and 0,001 - 0,003 % tellurium. The change of vapor pressure on rising temperature follows the vapor elasticity curve. After complete evaporation of the substance the vapor goes over to the domain of the unsaturated state. By the method of the smallest squares the dependence was deduced as the following formula:

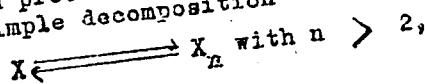
$$\lg P_{MM} = - \frac{4987,3}{T} + 8,0785$$

CARD 1/4

20-5-29/60

Association States of Selenium in the gas phase.

It is almost identical with Brooks' formula and may serve as a criterion for the accuracy of the authors' measurements. From the pressures of the unsaturated vapor the ν -values (average number of atoms in the molecule) were calculated by the gasequation of the state. Fig. 1 records the dependences of ν on P. The form of the curve allows an evaluation of the character of the dissociation process in the systems investigated. In the case of a simple decomposition



the curves have to have S-form, as shown by Smith. According to the position of their bending point the n-value can be determined. From the test results obtained by the the authors it is difficult, however, to estimate unequivocally the position of this point. In a qualitative respect the character of the curves established by the authors is not contradictory to general opinion. But the constants of simple decomposition $Se_6 = 3 Se_2$, calculated according to formula

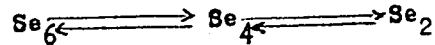
$$K = \left(\frac{6-\nu}{4} p\right)^3 : \frac{\nu-2}{4} p, \text{ show a}$$

CARD 2/4

20-5-29/60

Association States of Selenium in the gas Phase.

rising with increasing P at high temperatures. The decrease of the constants on a pressure drop indicates an intermediate step between Se_2 and Se_6 . If one assumes that a decomposition



takes place, the following is true; $(6-\gamma)P:4 = P_2+P_4:2$ and $(\gamma-2)P:4 = P_6+P_4:2$, where P_2, P_4 and P_6 representing the partial pressures of the corresponding associates. Therefore the constant is in reality: $K = \frac{P_2(2 + K_1 P_2)^3}{4(K_4 + 2K_6 P_2)}$ with $K_4 = P_4 : P_2^2$ and

$$K_6 = P_2^3.$$

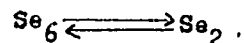
From this equation it follows that the constant shall increase with a P_a -increase proportional to the total pressure, which is the case here. It may easily be demonstrated that the constants would decrease if Se_8 were

CARD 3/4

20-5-29/60

Association States of Selenium in the Gas Phase.

present in the system beside Se_2 and Se_6 . The constants of a 3-step decomposition describe only the 700-900°C isotherms satisfactorily. The constants of the 4-step decomposition describe all isotherms well. This agrees with the stability of the constants of simple decomposition



at temperatures of from 550 to 650°C, in which the influence of Se_4 -molecules is compensated by that of Se_8 . In the selection of constants of a 4-step decomposition (analogous to the decomposition of sulfur) the authors arbitrarily assumed independence of heat effects from temperature, which it is true, is not quite correct.

ASSOCIATION:

"Ya. V. SAMOYLOV" Scientific institute for fertilizers and insecto-fungicides.

(Nauchnyy institut po udobreniyam i insektofungitsidam im. Ya. V. Samoylova)

PRESENTED BY:

S.I. VOL'KOVICH, member of the Academy.

SUBMITTED:

24.12. 56.

AVAILABLE:

Library of Congress.

CARD 4/4

LAPINA, L. M.

AUTHORS: Lapina, L. M., Illarionov, V. V. 78-3-5-26/39

TITLE: On the Formation of Mixed Molecules of Sulfur-Selenium
(Ob obrazovanii smeshanykh molekul sera-selen)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1956, Vol 3, Nr 5,
pp 1210-1213 (USSR)

ABSTRACT: The behavior of the mixture of unsaturated vapors of both sulfur and selenium in temperature intervals from 550 to 900°C was investigated by means of the static method. The investigation was carried out in a special device with a compensating manometer. It was found that mixed molecules of sulfur and selenium are formed during this process. According to increasing temperature the mixed molecules become unstable and dissociate in pure components. The formation of mixed molecules of sulfur and selenium does not take place by the exchange of two atoms of the initial components, but by individual atoms. Higher temperature favors the process of dissociation. There are 2 figures, 11 tables and 17 references, 4 of which are Soviet.

Card 1/2

On the Formation of Mixed Molecules of Sulfur-Selenium

78-3-5-26/39

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungisidam im. Ya. V. Samoylova (Scientific Institute for Fertilizers, Insecticides and Fungicides imeni Ya.V. Samoylov

SUBMITTED: August 5, 1957

AVAILABLE: Library of Congress

1. Selenium-sulfur vapors--Molecular association 2. Molecular association--Test results

Card 2/2

AUTHOR: Lapina, L. M. 78-3-6-16/30

TITLE: Investigations of the Binary System Sulfur-Selenium in the Fields of Low Selenium Concentrations (Issledovaniye binarnoy sistemy sera-selen v oblasti nizkikh kontsentratsiy selena)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 6, pp. 1386-1390 (USSR)

ABSTRACT: The binary system sulfur-selenium was investigated in low selenium concentrations for the purpose of the investigation of the possibilities of separating selenium from sulfur. The investigations were carried out on a specially constructed device for dynamic investigations of the binary gaseous sulfur-selenium system. The dynamic method for the distribution of selenium in sulfur in concentrations of 0,01-1% selenium was carried out by radioactive selenium within the temperature interval of from 250 to 280°C. The distribution coefficient of selenium between the liquid and gaseous phase amounts to 2,4. A fundamental possibility for the purification of sulfur of smaller quantity of selenium by fractionated condensation exists in principle.

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Investigations of the Binary System Sulfur-Selenium in the Fields of Low Selenium Concentrations

Higher values were found for the activity-coefficients of selenium in sulfur, from which it may be concluded that mixed molecules are formed in this connection. In practice, separation is connected with a great number of difficulties, especially on account of the viscosity of sulfur. There are 2 figures, 2 tables, and 11 references, 5 of which are Soviet.

ASSOCIATION: Nauchnyy institut po udobreniyam i insektofungisidam im. Ya. V. Samoylova (Scientific Institute for Fertilizers and Pest Control imeni Ya.V. Samoylov)

SUBMITTED: August 5, 1957

AVAILABLE: Library of Congress
1. Binary compounds--Analysis 2. Sulfur--Separation 3. Selenium
--Separation 4. Selenium--sulfur systems--Analysis

Card 2/2

USACHEVA, N.I.; LAPINA, L.M.

Complexometric determination of aluminum in the presence of
phosphorus. Zav. lab. 30 no.11:1331 '64 (MIRA 18:1)

1. Nauchno-issledovatel'skiy institut po udobreniyam i in-
sektofungitsidam.

LAPINA, L.M.; KIZAS, A.Yu.; GRISHINA, I.A.

Ammonium ferri and aluminophosphates. Zhur. prikl. khim. 38 no.4:
736-745 Ap '65. (MIRA 18:6)

36577
S/123/62/000/007/009/016
A004/A101

11950

AUTHORS: Lapina, L. N., Lebedev, N. A.

TITLE: Ultrasonic cleaning of components of electric vacuum devices

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 7, 1962, 32, abstract
7B170 (V sb. "Primeneniye ul'trazvuka v tekhnol. mashinostr.",
no. 2, Moscow, 1960, 96-100)

TEXT: The authors analyze the process of ultrasonic cleaning of components of electric vacuum devices. It is pointed out that the most effective cleaning is effected in trichloroethylene, benzene and other solvents destroying rubber parts. The authors describe the bath design for ultrasonic cleaning. The bath consists of the casing and the coil pipe for cooling the liquids in the bath. On the bottom of the latter the ultrasonic converter is located, having a frequency of 20 kc and a power of 1.5 kW. The dirty components are loaded either directly into the liquid in the bath (if it does not destroy the insulation) or into a glass vessel with the solvent. It is pointed out that the finish cleaning of components is facilitated by washing in the ultrasonic bath after pickling with acid or alkaline solutions. In this case it is possible to remove the

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Ultrasonic cleaning of components ...

component burrs (e.g. of klystron copper circuits) on the ultrasonic installation. The components are preliminarily pickled in weak acidic solutions which do not destroy their surfaces, are washed in cold running water, dried and subjected to a 2 - 3 min ultrasonic treatment in trichloroethylene. Then they are rinsed in the same solution, dried for 2 - 3 min in a heating closet and again treated with ultrasonics for 1 - 2 min in distilled water, rinsed in water and alcohol and then dried. The whole treatment cycle, not including the pickling, takes 10 min. With such a technology the component dimensions are not impaired. The possibility is pointed out of using ultrasonics in manufacturing components by the galvanoplastic method, e.g. nickel cathodes of intricate shape and narrow-channel waveguides for the measuring systems of the millimeter range. In manufacturing cathodes, a nickel layer is applied by the galvanic method on the spiral-shaped aluminum base. After etching away the aluminum, a cathode of the necessary configuration is obtained. The preparation of the aluminum base surface is an important operation in cathode manufacture. The use of ultrasonics considerably improved the cleaning quality, cleaning taking place within 2 - 3 min with subsequent rinsing and drying in the closet. The whole operation takes 5 - 6 min. Then the aluminum bases are pickled using ultrasonics, which accelerates the process by a factor of 10 - 12. Then the pickled bases are washed in an ultra-

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sonic bath with distilled water for 5 - 6 min, rinsed in distilled water and alcohol and dried in a closet. Ultrasonics can be successfully used in cleaning components of electric vacuum devices after stamping operations and in washing of quartz and glass tubes.

[Abstracter's note: Complete translation]

Card 3/3

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1 46965-66 EWT(a)/EWT(m)/EWD(w)/EWD(r)/T/EWD(+)/EWT/EWD(r) TJP(c)
ACC NR: AT6024928 (A,N) SOURCE CODE: UR/2981/66/000/004/0187/0191
JD/WM/EM/JH

AUTHOR: Loktionova, N. A.; Ovchinnikov, Yu. F.; Nikonorov, Ye. A.; Zanolodchikova, V. N.; Lapina, L. V.; Perevozchikov, A. V.; Palagov, P. I.

ORG: none 24 16 27 42 B+1
TITLE: Residual stresses in weld joints of aluminum alloys

SOURCE: Alyuminiyevyye splyavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splyavy (Heat resistant and high-strength alloys), 187-191

TOPIC TAGS: tensile stress, compressive stress, aluminum alloy property, weld evaluation

ABSTRACT: The residual stresses in various parts of a welded structure of ATsM alloy were determined by a mechanical method, and the influence of the artificial aging and tempering of the weld joints on the magnitude of these stresses was investigated. It was found that longitudinal residual stresses up to 10-11 kg/mm² and compressive residual stresses up to 11-12 kg/mm² in the transverse direction arise in the zone of the weld joints. Artificial aging of the weld joints of ATsM alloy for 100 hr at 90° does not change the magnitude and character of the residual stresses in the heat-affected zone as compared to the residual stresses in the naturally aged state. Tempering of the zone of the weld joint by induction heating to 240-250°C for 4-5 min followed by cooling of the heat-affected zone with water increases the magnitude of the

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longitudinal tensile residual stresses by 1.5-2 kg/mm², without changing the sign. At the same time, the transverse residual stresses change into compressive ones and reach 1/2 kg/mm². Orig. art. has: 2 formulas.

SUB CODE: 11/ SUEM DATE: none/ ORIG REF: 003

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