"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

MARKOV, N.N.; PALEY, M.A.

Results of the standardization of toothed transmissions. Standartizatsiia 26 no.1:18-20 Ja '62. (MIRA 15:1)
(Gearing--Standards)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, M.A.

Simplification by decreasing types and sizes of manufactured objects.
Standartizatsiia no.2:91-94 Mr-Ap '57. (MLRA 10:6)
(Simplification in industry)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, M.A.

PALEY, M.A., inzh.

Conference of the Technical Committee 3 "Tolerances and Allowances" of the International Standards Organization. Standartizatsiia no.6:82-83 N-D '57. (MIRA 10:12)

1. Byuro vzaimozamenyayemosti Komiteta standartov, mer i izmeritel'nykh priborov.
(Berlin--Standards, Engineering)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, M.A.

Standardization of deviations of the shape and layout of surfaces. Standartizatsiia 27 no.4:3-10 Ap '63. (MIRA 16:4)
(Surfaces (Technology)—Standards)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, M.A., inzh.

Establishing uniformity of standards for allowances and settlings. Standartizatsiia 22 no.1:11-15 Ja-F '58. (MIRA 11:2)

1. Byuro vzaimozamenyayemosti Komiteta standartov, mer i izmeritel'nykh priborov.

(Standards, Engineering)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

Paley, M.A.

AUTHOR: Kolitz, A., Dr.-Ing. 28-4-33/35

TITLE: New Ways of German Standardization (Novyye puti germanskoy standartizatsii)

PERIODICAL: Standartizatsiya, 1957, # 4, pp 89 - 92 (USSR)

ABSTRACT: This is a review of a German article published in "DIN-Mitteilungen" r.2, 1956, # 8/9. (Reviewer M.A. Paley)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY M A

AUTHOR: Paley, M.A., Engineer 28-58-1-3/34

TITLE: Ways of Unifying the Standards of Tolerances and Fits (Puti unifikatsii standartov na dopuski i posadki)

PERIODICAL: Standartizatsiya, 1958, # 1, pp 11-15 (USSR)

ABSTRACT: Ways of unifying the standards of tolerances and fits of the Communist bloc countries, is discussed. These standards are based on 2 systems: the OST system used in the USSR, Bulgaria, Rumania, as well as in the industry of Communist China and Korea (who have no national standards); and on the ISA system used in Hungary, the German Democratic Republic, Poland and Czechoslovakia.

The Bureau of Interchangeability of the Committee of Standards, Measures and Measuring Devices has worked out a project for amendments that will eliminate the most essential differences between the two systems without making radical changes of existing national standards. The principles of these amendments are given and two diagrams show how the tolerances for shafts and bores of the OST and ISA systems are combined in the project.

There are two figures.

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Ways of Unifying the Standards of Tolerances and Fits 28-58-1-3/34

ASSOCIATION: Byuro vzaimozamenyayemosti komiteta standartov, mer i izmeritel'nykh priborov (Bureau of Interchangeability of the Committee of Standards, Measures and Measuring Devices)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

AUTHOR: Paley, M.A., Engineer. 28-6-32/40

TITLE: Conference of the ISO/TC 3 "Tolerances and Fits" (Soveshchaniye ISO/TK 3 "Dopuski i posadki")

PERIODICAL: Standartizatsiya, 1957, # 6, pp 82 - 83 (USSR)

ABSTRACT: Information is given on the conference of the ISO Technical Committee 3 in Berlin in October 1957, at which a Soviet delegation participated as an observing member since the USSR does not use the ISA system.

ASSOCIATION: Bureau of Interchangeability of the Committee of Standards, Measures and Measuring Devices (Byuro vzaimozamenyayemosti Komiteta standartov, mer i izmeritel'nykh priborov)

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Card 1/1 1. Measurements-Standards

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, M.M.

VOLODIN, Ye.I., kandidat tekhnicheskikh nauk; GORODETSKIY, I.Ye., professor, doktor tekhnicheskikh nauk [deceased]; DOSCHATOV, V.V., inzhener; KOROTKOV, V.P., kandidat tekhnicheskikh nauk; MANTSEV, B.M., inzhener; NESTEROVSKIY, M.M., inzhener; PALEY, M.A., inzhener; ROSTOVTSEV, A.Ya., kandidat tekhnicheskikh nauk; TAYTS, B.A., professor, doktor tekhnicheskikh nauk; FEDINOV, V.Ya., kandidat tekhnicheskikh nauk; ERVAYS, A.V., inzhener; CHUDOV, V.A., inzhener; ACHERKAN, N.S., doktor tekhnicheskikh nauk, professor, glavnyy redaktor; VLADISLAVLEV, V.S., redaktor; MALOV, A.N., redaktor; POZDNYAKOV, S.N., redaktor; STOLBIN, G.B., redaktor; CHERNAVSKIY, S.A., kandidat tekhnicheskikh nauk, redaktor; MARKUS, M.Ye., inzhener, redaktor [deceased]; KARGANOV, V.G., inzhener, redaktor graficheskikh rabot; SOKOLOVA, T.F., tekhnicheskiy redaktor

[Metal worker's manual; in five volumes] Spravochnik metallista; v piati tomakh. Red. sovet N.S.Acherkan i dr. Moskva, Gos.nauchno-tekhn. izdvo mashinostroit.lit-ry. Vol.1.(Pod red.S.A.Chernavskogo).1957.603 p. (Mechanical engineering)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

TUKHVATULLIN, G.A.; PALEY, M.A., inzhener, redaktor; MATVEYEVA, Ye.N., tekhnicheskiy redaktor

[A collection of problems in tolerances, clearances and calibrations] Sbornik zadach po dopuskam, posadkam i kalibram. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1955. 95 p. (MLRA 9:11) [Microfilm]
(Tolerance (Engineering))
(Calipers)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, M.A.

Advantages of the standardization of sliking bearings in mass production. Standartizatsiia 24 no.8:59 Ag '60.
(MIRA 13:9)

(Bearings (Machinery)--Standards)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, M.A.

Three-contact devices for checking the nonroundness of surfaces.
Stan. i instr. 35 no.1:39-40 Ja '64. (MIRA 17:3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, M.A.

Temporary methods for determining the economic efficiency of standardization. Standartizatsiia 25 no.10:55-58 O '61. (MIRA 14:9)

(Standardization)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, M.A.

From technical periodicals. Standartizatsiia 27 no.7:56-57 S '63. (MIRA 16:10)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, M.A.

Considering various climatic conditions in selecting protective coatings. Standartizatsiia 25 no.8:60-63 Ag '61. (MIRA 14:7)
(Protective coatings)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

BALAKSHIN, O.B., kand. tekhn. nauk; BYKHOVSKIY, M.L., prof., doktor tekhn. nauk; VOLODIN, Ye.I., kand. tekhn. nauk; GRIGOR'YEV, I.A., kand. tekhn.nauk; DRAUDIN-KRYLENKO, A.T., inzh.; IVANOV, A.G., kand. tekhn.nauk; KOZLOV, M.P., kand. tekhn. nauk; KOROTKOV, V.P., prof.; KOCHENOV, M.I., kand. tekhn.nauk; KUTAY, A.K., kand. tekhn. nauk; MARKOV N.N., kand. tekhn. nauk; PALEY, M.A., inzh.; RAYBMAN, N.S., kand. tekhn.nauk; ROSTOVYKH, A.Ya., kand. tekn. nauk; RUMYANTSEV, A.V., kand. tekhn.nauk; SARKIN, I.G., prof.; SMIRNOV, A.S., inzh.; TAYTS, B.A., prof., doktor tekhn. nauk; YAKUSHEV, A.I., prof., doktor tekhn. nauk; NESTEROV, V.D., inzh., nauchnyy red.; CHUDOV, V.A., inzh., nauchnyy red.; [illegible] tekhn.nauk, prof., red.; BLAGOSKLONOVA, N.Yu., inzh., red. izd-va; SOKOLOVA, T.F., tekhn. red.

[Manufacture of instruments and means of automatic control: a manual in five volumes] Priborostroenie i sredstva avtomatiki; spravochnik v piati tomakh. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry. Vol.1.[Interchangeability and engineering measurements] Vzaimozameniaemost' i tekhnicheskie izmereniia. 1963. 568 p. (MIRA 16:8)
(Electronic measurements) (Automatic control)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

S/115/62/000/003/003/010
E194/E484

AUTHOR Paley, M.A

TITLE Determination of errors of roundness from profilograms

PERIODICAL: Izmeritel'naya tekhnika, no 3 1962 9 11

TEXT Recently profilograms have become widely used for indicating deviations of shapes of cylindrical surfaces from true circles The principal difficulty in assessing the deviation from profilograms is that eccentricity of the section relative to the axis of rotation is excluded. According to a recent draft standard the out-of-roundness is defined as the maximum distance between points on the actual profile and on a contiguous circle whilst the centre of the section is defined as the centre of the contiguous circle. In the case of a shaft the contiguous circle is defined as the smallest possible diameter which could be fitted round the actual circle, for the case of a hollow cylinder it is the largest diameter that can be fitted in it. This article gives a brief mathematical theory of measurement of deviation from roundness as defined in this way It is concluded that assessment of the nature and amount of out-of-roundness from oscillograms [illegible]

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[illegible]ALEY, M.A.

Development of a [illegible] of [illegible] [illegible]eability.
Standartizatsiia [illegible] no.10:31-3[illegible] ([illegible]).

[illegible]

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, Mark Abramovich; MARKOV, A.S., nauchn. red.

[Deviations in the shape and arrangement of surfaces] Otkloneniia formy i raspolozheniia poverkhnostei. Moskva, Izd-vo standartov, 1965. 117 p. (MIRA 18:8)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

Paley, M.B.

PHASE I BOOK EXPLOITATION SOV/4530

Vsesoyuznoye soveshchaniye po osnovnym problemam teorii mashin i mekhanizmov. 2d, Moscow, 1958

Dinamika mashin; sbornik statey (Dynamics of Machines; Collection of Articles) Moscow, Mashgiz, 1960. 243 p. (Its Trudy) Errata slip inserted. 3,000 copies printed.

Sponsoring Agency: Institut mashinovedeniya Akademii nauk SSSR.

Editorial Board: I. I. Artobolevskiy (Resp. Ed.) Academician, S. I. Artobolevskiy, Doctor of Technical Sciences, Professor, G. G. Baranov, Doctor of Technical Sciences, Professor, A. P. Bessonov, Candidate of Technical Sciences, V. A. Gavrilenko, Doctor of Technical Sciences, Professor, A. Ye. Kobrinskiy, Doctor of Technical Sciences, N. I. Levitskiy, Doctor of Technical Sciences, Professor, and L. N. Reshetov, Doctor of Technical Sciences, Professor.

Ed.: L. V. Bezmenova, Candidate of Technical Sciences; Managing Ed. for General Technical Literature and Literature on Transport Machine Building (Mashgiz): A. P. Kozlov, Engineer; Tech. Ed.: B. I. Model'.

PURPOSE: This collection of articles is intended for engineers, designers, workers at scientific research institutes, and instructors at schools of higher technical education.

COVERAGE: This collection consists of reports presented at the All-Union Conference on Problems in the Theory of Machines and Mechanisms held in Moscow in 1958. The reports discuss several problems of the dynamic design of complex mechanical systems. No personalities are mentioned. References accompany most of the articles.

AVAILABLE: Library of Congress (TJ181.V8 1958)

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APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

AYZENSHTADT, L.A.; PEN'KOV, P.M.; GLADKOV, B.A.; LIKHT, L.O.; KRIMER, T.Ye.; KASHEPAV, M.Ya., kand. tekhn. nauk; MERPERT, M.P., kand. tekhn. nauk; KOPERBAKH, B.L.; CHERNIKOV, S.S., kand. tekhn.nauk; BELOV, V.S.; ZHURIN, B.F.; MONAKHOV, G.A., kand.tekhn.nauk; MOROZOV, I.I.; MUSHTAYEV, A.F.; OGNEV, N.N.; PALEY, M.B., kand. tekhn. nauk; FURMAN, D.B.; LIVSHITS, A.L., kand.tekhn.nauk; MECHETNER, B.Kh.; SOSENKO, A.B; AVDULOV, A.N.; LEVIN, A.A., kand.tekhn. nauk; YAKOBSON, M.O., doktor tekhn.nauk; MAYOROVA, E.A., kand.tekhn.nauk; MOROZOVA, Ye.M.; ZUSMAN, V.G., kand.tekhn. nauk; MAYDIS, V.A., kand.tekhn.nauk; VLADZIYEVSKIY, A.P., prof., doktor tekhn. nauk, red.; BELOGUR-YASNOVSKAYA, N.I., red.; CHIGAREVA, E.I., red.; ASVAL'DOV, M.Ya., red.; KOGAN, F.L., tekhn. red.

[Machine-tool industry in capitalist countries] Stanko-stroenie v kapitalisticheskikh stranakh. Pod red. i s predisl. A.P.Vladzievskogo. Moskva, 1962. 822 p. (MIRA 15:7)

1. Moscow. TSentral'nyy institut nauchno-tekhnicheskoy informatsii mashinostroyeniya. 2. Eksperimental'nyy nauchno-issledovatel'skiy institut metallorezhushchikh stankov (for Vladziyevskiy, Belogur-Yasnovskaya, Chigareva, Asval'dov, Kogan).

(Machine-tool industry)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, M. B., Cand Tech Sci -- (diss) "Investigation of the driving gear of milling machine." Moscow, 1960. 13 pp; 1 page of diagrams; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow of Machine Instruments im I. V. Stalin); 200 copies; price not given; (KL, 25-60, 133)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, M. B.

M. B. Paley, "Determination of Optimum Moment of Inertia of Flywheels for Milling Machines."

Paper presented at the 2nd All-Union Conf. on Fundamental Problems in the Theory of Machines and Mechanisms, Moscow, USSR, 24-28 March 1958.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, M.B.

Method of measuring the torque of cutting forces in the experimental determination of machine tool efficiency. Stan. i instr. 26 no.9:18 S '55. (MLRA 9:1)

(Machine tools) (Metal cutting)

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S/122/61/000/0.../0.5/0.5
A.../A...

AUTHOR: None given

TITLE: Authors' abstracts of dissertations

PERIODICAL: Vestnik mashinostroyeniya, no. ..., 196..., 86 - 87

TEXT: Brief abstract of eleven dissertations are published, the two first for the degree of Doctor of Technical Sciences, and nine for the degree of Candidate of Technical Sciences. 1) N. M. Karelin, of the Moskovskiy stanko-instrumental'nyy institut imeni I. V. Stalina (Moscow Institute of Machine Tools and Instruments im. I. B. Stalin): "Machining parts with curved cross section without the use of tracers". The author has developed a method for plotting kinematic system diagrams for machine tool attachments for machining round parts with the outline traced by epicycloids and hypocycloids or their equidistants. 2) B. A. Morozov, Moskovskoye Vyssheye tekhnicheskoye uchilishche imeni N. E. Baumana (Moscow School of Higher Technical Education imeni N. E. Bauman): "Study of the work capacity of machines and equipment of metallurgical plant shops", concerning design improvement. The author has developed a method for comprehensive evaluation of the work capacity of machines. It permits the selection of

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Authors' abstracts of dissertations

optimum designs and determining the engineering calculation data in a short time. 3) Yu. Z. Selyukov of the Moscow Institute of Machine Tools and Instruments imeni Stalin: "Investigation of the vibration resistance of a shaping machine". The author has conducted experiments and gives recommendations. 4) M. B. Pasey, of the Moscow Institute of Machine Tools and Instruments im. Stalin, "Investigation of the milling machine drive". The work concerns gear and belt drive for a milling machine spindle and presents the results of theoretical and experimental studies of the rotation unevenness, and a calculation method for the flywheel inertia moment. The specific features of the belt drive are analyzed. 5) Lu Ch'ao-tseng, of the Moscow institute of Machine Tools and Instruments im. Stalin: "Study of the adhesion and friction phenomena between flat steel surfaces (gage blocks)". The author studied the adhesion and friction forces between Johanson gage blocks in funotion of the oil film depth, roughness and oil properties; determined the real oil film depth after rubbing-in, the effect of load, the adhesive capacity variation with wear, and investigated the phenomenon of oil separation from inside metal (gage blocks). 6) D. D Shevchenko of Institut mekhaniki AN USSR (Institute of Mechanics AS UkrSSR) "A study of the contact of a rough surface in the process of pressing into plastic medium". The work concerns the ap-

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Authors' abstracts of dissertations

[illegible] of a hard rough surface to a smooth surface of plastic medium [illegible] Surface. 3) B. N. Bobrynin of Gor'kovskiy politekhnicheskiy institut imeni A. A. Zhdanova (Gor'kiy Polytechnic Institut imeni A. A. Zhdanov): "Study of [illegible] ing trimming-punching process in laminar and fibrous sheet plastics" [illegible] concerns mainly the technology of process without heating. Recommendations given for the fabrication of parts of different types. 8) R. A. Moznikov of the Institute of Mechanics AS UkrSSR: "Vibration test installations with magnetic exciters", concerning the rational use of such units, their performance in different operation conditions. 9) Yeh Mu-tsen of the Moscow Institute of Machine Tools and Instruments im. Stalin: "Experimental and theoretical [illegible] the strength of broaches taking into account the concentration of internal stresses". A new method is suggested for the calculation of stress concentration. 10) Vang Ch'ih-hao of the Moscow Institute of Machine Tools and Instruments im. Stalin: "Investigation of chatter in gear cutting machine". Chatter in straight-tooth gears is investigated, and a theoretical and empirical [illegible] of different milling methods is presented. The effect of the design [illegible] elements on chatter is analyzed. 11) Wang Tsen-ta of the Moscow Institute of Machine Tools and Instruments im. Stalin: "A study of the motion stabil[illegible]

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S/1[illegible]/61/000/00[illegible]
A16 , A130

Authors' abstracts of dissertation

work elements of hydraulically driven machine tools". The work presen[illegible]
[illegible] analysis and experimental data

Card 4/4

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

ACC NR: AP7003011 (A) SOURCE CODE: UR/0413/66/000/024/0158/0158

INVENTORS: Chernikov, S. S.; Paley, M. B.; Kosovskiy, V. L.

ORG: none

TITLE: An automatic milling machine. Class 49, No. 150737

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 24, 1966, 158

TOPIC TAGS: metalworking, metalworking machine, milling machine

ABSTRACT: This Author Certificate presents an automatic continuous-action milling machine with an endless chain-driven carrier bed, with carriages for mounting the milled parts and with an immobile milling head. To increase its productivity and secure its safe operation, the chain-driven carrier bed is placed in the vertical plane with the chain following a triangular path. The lateral vertical face of the triangle acts as the working limb of the carrier and is located at the side opposite to the milling head. The upper horizontal side forms the feeding part of the carrier. The endless chain-driven carrier may be mounted on runners moving automatically along the inclined guiding ways in a direction perpendicular to the spindle axis of the milling head.

SUB CODE: 13/ SUBM DATE: 19Feb61

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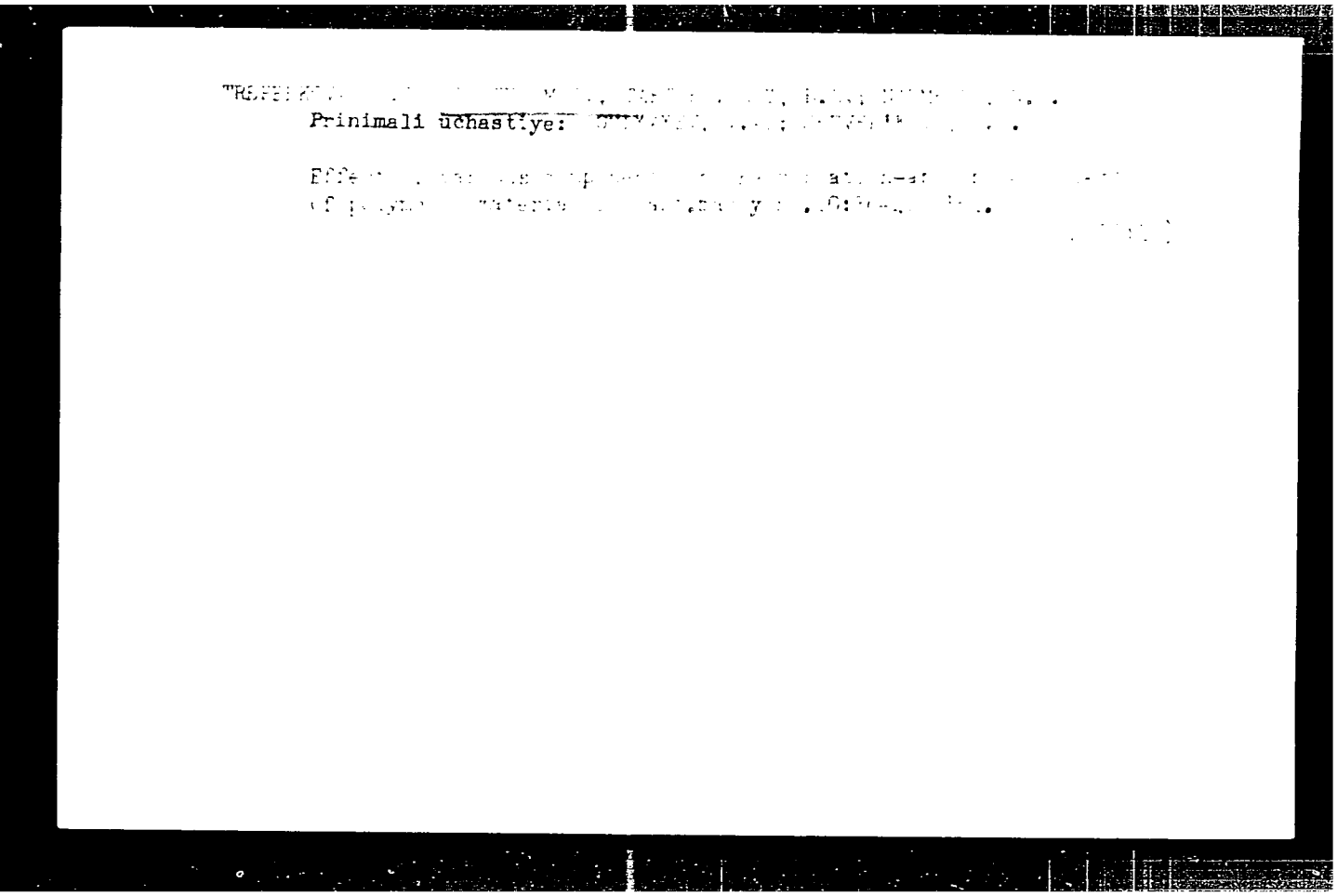

Prinimali uchastiye:

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L 59231-65 EWT(d)/EWP(e)/EWT(m)/EWP(w)/EPF(c)/EWP(i)/EWP(j)/T/EWP(k)/EWP(b)
Pc-4/Pq-4/Pf-4/Pr-4 EM/RM/WH

ACCESSION NR: AP5016881 UR/0374/65/000/003/0029/0032
678:539.04

AUTHOR: Paley, M. I.(Moscow); Trepelkova, L. I. (Moscow)

TITLE: The influence of the shape and size of cells on the compressive strength of honeycomb boards

SOURCE: Mekhanika polimerov, no. 3, 1965, 29-32

TOPIC TAGS: honeycomb board, compressive strength, honeycomb cell, cell shape, board lining

ABSTRACT: The influence of the shape and size of the cells, and of the height and lining of honeycomb panels, on the strength of honeycomb boards has been investigated. Tests were carried out on boards made of glass fabrics "E" and "T" and cotton fabric bases impregnated by the bakelite varnish "A". Lining was made of the glass fabric ASTT(b)S, with the same varnish. Results involving three types of construction - 1) a regular symmetrical hexahedral shape; 2) hexahedral half-step displaced cells; and 3) hexahedral reinforced cells - showed that the construction providing the best compressive strength is (3) with (1) and (2) following in order of decreasing quality. The reinforced cell obeys all the rules of ordinary honeycomb boards; the boards with an outer face lining exhibit

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L 59231-65

ACCESSION NR: AP5016881

an increased compressive strength, particularly along the cell axes. "The authors thank A. P. Zuyev for his help during the investigation." Orig. art. has: 4 figures and 1 table.

ASSOCIATION: None

SUBMITTED: 12Nov64 ENCL: 00 SUB CODE:

NO REF SOV: 005 OTHER: 000

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

L 18446-66 EWT(m)/EWP(j)/T WW/RM

ACC NR: AP6002546 (A) SOURCE CODE: UR/0286/65/000/023/0045/0046

AUTHORS: Trepelkova, L. I.; Tartakovskiy, B. D.; Paley, M. I.; Naumkina, N. I.; Li, P. Z.

ORG: none

TITLE: Method for plasticizing epoxy resins and compositions based on them. Class 39, No. 176675

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 45-46

TOPIC TAGS: epoxy plastic, plasticizer, polyether/ PGA-5 polyether

ABSTRACT: This Author Certificate presents a method for plasticizing epoxy resins and compositions based on them by using polyether. To broaden the selection of plasticizers and to add vibration absorption properties to the epoxy compositions, the polyether PGA-5 is used as the plasticizer. This is a product of the interaction of dibutyladipinate and a mixture of diethylene glycol and ethylene glycol.

SUB CODE: 11, 07/ SUBM DATE: 21Jan65

Card 1/1 UDC: 678.643.42'5.678.674.049

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

AKHTER, A.S.; TREPELKOVA, L.I.; PALEY, M.I.

Cold-hardening adhesive for gluing polyvinylchloride plastics to themselves and to other materials. Plast.massy no.8:64-67 '62. (MIRA 15:7)

(Plastics) (Adhesives)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, M.I., TREFELKOVA, L.I., AKOPDZHANYAN, E.A.; GOLODNAYA, S.L.

Investigating the resistance to fungi of the acoustical materials based on polyvinyl chloride resins. Plast. massy no.2:68-69 '64. (MIRA 17:8)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

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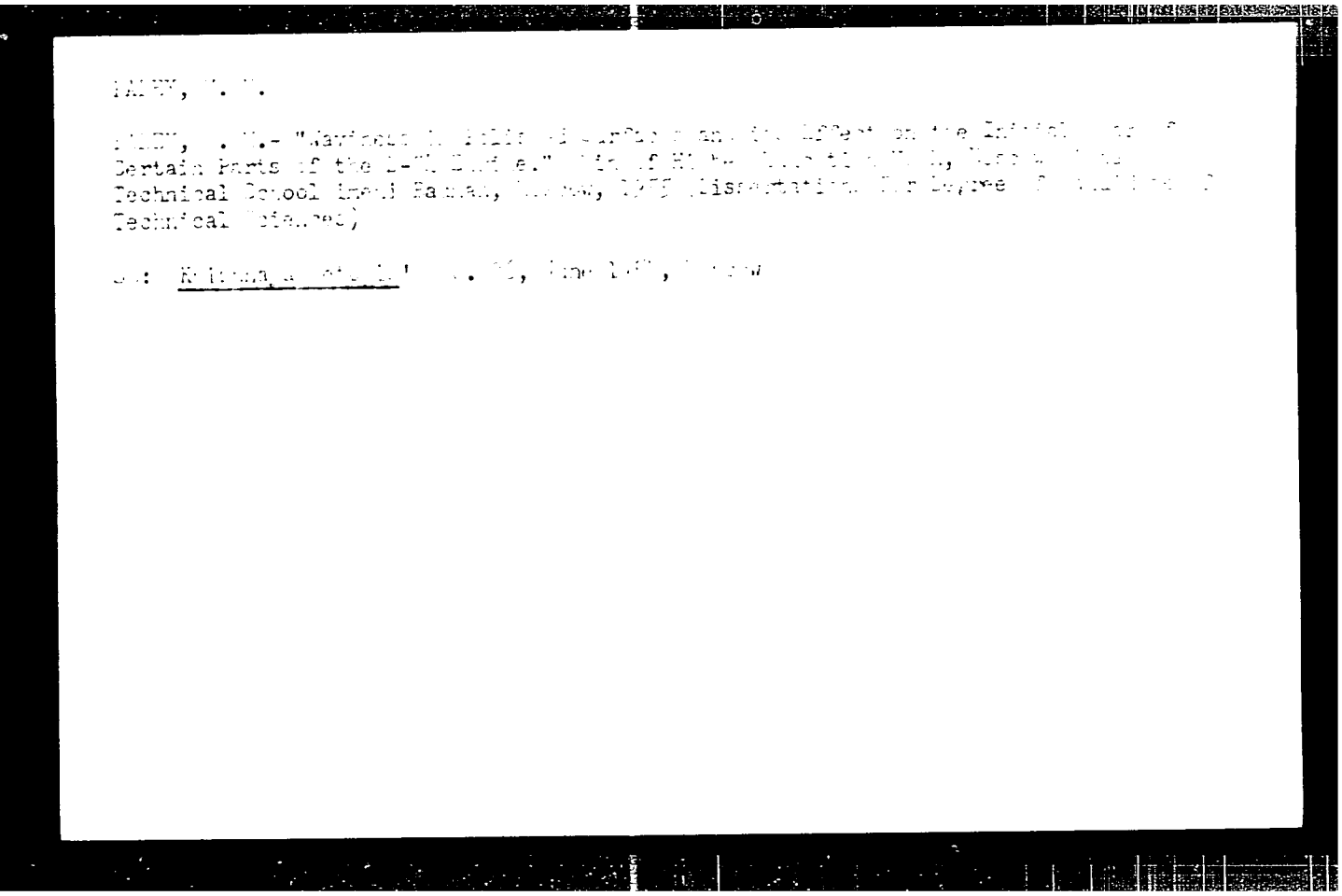

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

SOV/121-58-9-6/21

AUTHOR: Paley, M.M.

TITLE: The Surface Waviness in Surface Grinding (Volnistost' poverkhnosti pri ploskom shlifovanii)

PERIODICAL: Stanki i Instrument, 1958, Nr 9, pp 21 - 22 (USSR)

ABSTRACT: Specimens of carbon and high-speed steel were surface-ground with diamond-dressed ceramic-bonded wheels of electrocorundum, 36 grit, at 25 mps surface speed and 0.01 mm depth of cut. Figure 2 shows the effect of the duration of grinding which increases the waviness. The same effect is found in grinding with larger grit wheels. The effect increases with a greater depth of cut and also (Figure 4) with a higher surface speed and a greater wheel hardness (Figure 5). The physical phenomena responsible for waviness are briefly discussed.
There are 7 figures.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

SOV/115-59 -2-8/38

9(6)
AUTHOR: Paley, M.M.

TITLE: Optico-Mechanical Profilograph for Measuring Surface Undulation (Prisposobleniye optiko-mekhanicheskogo profilografa dlya izmereniya volnistosti poverkhnosti)

PERIOLICAL: Izmeritel'naya tekhnika, 1959, Nr 2, pp 16-17 (USSR)

ABSTRACT: The profilograph is used to measure cylindrical and plane surface undulations. An auxiliary supporting-junction has been introduced to reduce measuring errors, which is described in this paper. To eliminate the influence of roughness in measuring surface undulation, ball probes instead of diamond needles are utlized. Control of the work process is considerably facilitated by a microscope attached to the profilograph. There are 2 diagrammatic photographs.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, M.M.

Standardizing the waviness of machine-part surfaces. Nauch.dokl. vys.shkoly; mash.i prib. no.4:152-159 '58. (MIRA 12:5)

1. Stat'ya predstavlena Stalingradskim mekhanicheskim institutom.
(Surfaces(Technology)--Standards)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PAIRY, M.M.

PAIRY, M.M.

Surface ripples caused by grinding and their effect on the wear of parts. Trudy Sem. po kach. poverkh. no.3:251-260 '57. (MLRA 10:11)
(Surfaces (Technology)) (Mechanical wear)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

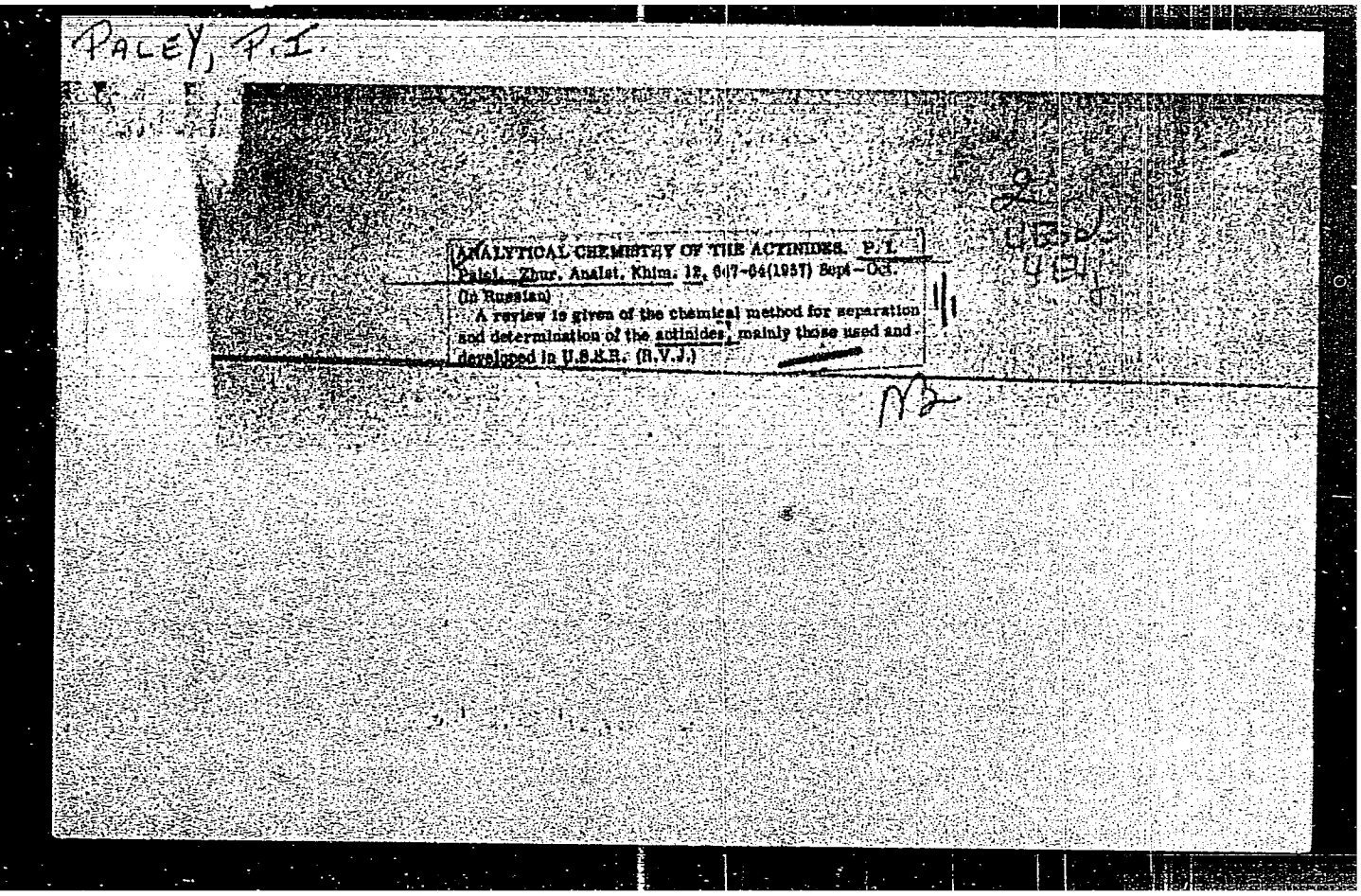
REVZIN, I.G.; ORATOVSKIY, V.I.; PALEY, N.A.

Preparation of granulated magnesium nitride by a continuous method. Trudy IREA no.25:465-469 '63.

(MIRA 18:6)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238



PALEY, P.I.

ANALYTICAL CHEMISTRY OF THE ACTINIDES. P.I.
Paley Zhur. Analet. Khim. 12, 607-64(1957) Sept-Oct.
(In Russian)
A review is given of the chemical method for separation and determination of the actinides, mainly those used and developed in U.S.S.R. (R.V.J.)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

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4

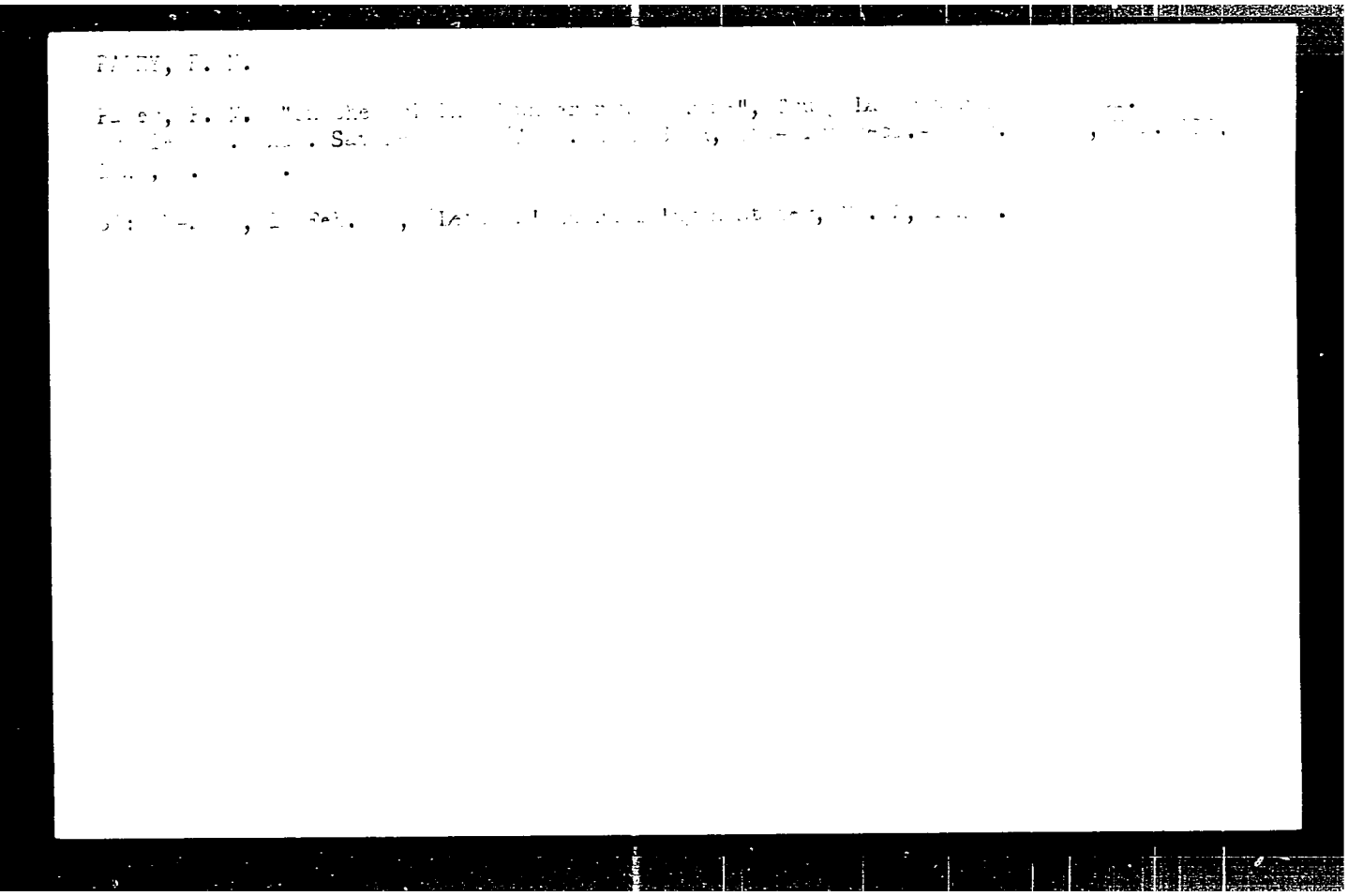
Sulfide-carbonate equilibria in mineral waters. P. N. Palei. *Ann. secteur anal. phys.-chim., Inst. chim. gén. (U. S. S. R.)* 9, 327-34(1936). For the detn. of the contents of H_2S and CO_2 in the Matzest mineral waters by measuring the partial pressure of gases a modified equation of Auerbach (*Z. physik. Chem.* 49, 217(1904)) is used.

Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238



APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, P. N.

23658.

O SODERZHANII KAL'TSIYA V NIT'YEVYKH VODAKH RAYONA UROVSKOY ENDEMII. TRUDY BIOGEOKHIM. LABORATORII (IN-T GEOKHIMII I ANALIT KHIMII IM VERNADSKOGO), IX, 1949, s. 31-53.

SO: LETOPIS' NO. 31, 1949

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

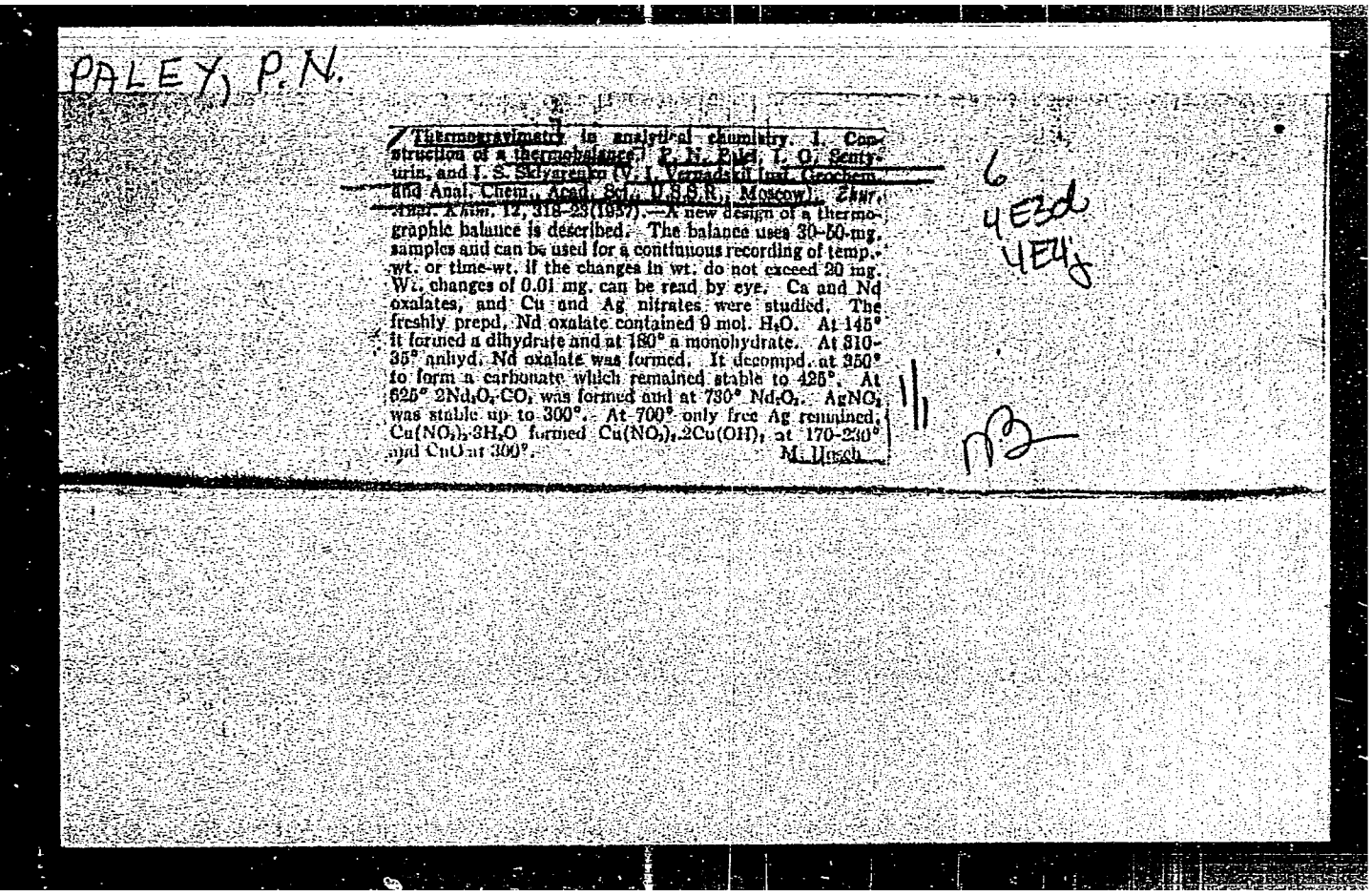
"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, P.N.

[Methods of determining small quantities of uranium in ores] Metody opredeleniia malykh kolichestv urana v rudakh; doklady, predstavlennye SSSR na Mezhdunarodnuiu konferentsiiu po mirnomu ispol'zovaniiu atomnoi energii. Moskva, 1955. 20 p. [Microfilm]
(Uranium ores) (Metallurgical analysis) (MLRA 9:3)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238



PALEY, P.N.

Thermogravimetry in analytical chemistry. I. Construction of a thermobalance. P. N. Paley, I. O. Sentyurin, and I. S. Sklyarenko (V. I. Vernadskii Inst. Geochem. and Anal. Chem., Acad. Sci. U.S.S.R., Moscow). Zhur. Anal. Khim. 12, 318-23(1957).—A new design of a thermographic balance is described. The balance uses 30-50-mg. samples and can be used for a continuous recording of temp.-wt. or time-wt. if the changes in wt. do not exceed 20 mg. Wt. changes of 0.01 mg. can be read by eye. Ca and Nd oxalates, and Cu and Ag nitrates were studied. The freshly prepd. Nd oxalate contained 9 mol. H_2O. At 145° it formed a dihydrate and at 180° a monohydrate. At 310-35° anhyd. Nd oxalate was formed. It decompd. at 350° to form a carbonate which remained stable to 425°. At 625° $2Nd_2O_3 \cdot CO_2$ was formed and at 730° Nd_2O_3. $AgNO_3$ was stable up to 300°. At 700° only free Ag remained. $Cu(NO_3)_2 \cdot 3H_2O$ formed $Cu(NO_3)_2 \cdot 2Cu(OH)_2$ at 170-230° and CuO at 300°.

M. Unsch

6
4E3d
4E4j

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

PALEI, P. N.

5

Analytical chemistry of actinoids. P. N. Palei. *Zhur. Anal. Khim.* 12, 647-64(1957).—A review of the contribution of Soviet chemists to the analysis of U, Th, Np, and Am. M. Hosch

4E4j
4E3d

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

LAVRUKHINA, Avguste Konstantinovna, ZOLOTOV, Yuriy Aleksandrovich,; PALEY, P.N., otv. red.; TRIFONOV, D.N., red. izd-va,; GUSEVA, A.P., tekhn. red.

[Transuranium elements] Transuranovye elementy. Moskva, Izd-vo Akad. nauk SSSR, 1958. 125 p. (MIRA 11:11)
(Transuranium elements)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

AUTHOR: Vdal tsova, N I

TITLE: Complexons in analytical chemistry (Kompleksony v analiticheskoy khimii International Conference in Moscow (Mezhdunarodnyy simpozium v Moskve

PERIODICAL: Priroda, 1956, Nr 6, p 74-75 USSR

ABSTRACT: The use of complexons in analytical chemistry and the prospective development of this new field was the subject of an international conference in November 1955 in Moscow. It was convened at the Institut geokhimii i analiticheskoy khimii imeni V.I. Vernadskogo Akademii nauk SSSR (Moskva) (Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy of the USSR Academy of Sciences (Moscow). The conference heard reports on: Theoretical questions in the chemistry of complexons; the use of new indicators in complexonometric titration; the application of complexons in the analytical chemistry of rare elements; the synthesis, properties and prospective use of new complexons Professor K B. Yatsimirskiy lectured on "The Thermochemistry of Complex Compounds with Complexons", Professor P.N. Paley on "Complexon III, as a Reducing Agent" and Professor A.P. Vasilevskiy on "Research Work in the Field of the Synthesis of New

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Complexons in Analytical Chemistry. International Conference in Moscow.

Complexons and Their Investigation". In the discussion the following prominent Soviet scientists participated: I.P. Alimarin, I.V. Tananayev, V.I. Kuznetsov, A.V. Rabko, N.I. Komar' and others.

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1. Chemistry-Conference 2. Chemistry-Reports

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, P.N.

AUTHOR: Bilimovich, G. N. SOV/75-14-4-30/30

TITLE: Section of Analytical Chemistry of the VIII Mendeleyev Congress on General and Applied Chemistry

PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 4, pp 511-512 (USSR)

ABSTRACT: Approximately 300 persons participated in the work of the Department of Analytical Chemistry, among them representatives of various scientific research institutes, higher schools and industrial enterprises in Russia, scientists from China, Bulgaria, the CSR, Poland, Hungary, and Italy. Approximately 70 reports were heard. In his opening speech I. P. Alimarin reported on the achieved results and on modern problems of analytical chemistry. I. V. Tananayev reported on the application of physico-chemical analysis in heterogeneous systems for the solution of a series of problems of analytical chemistry. V. I. Kuznetsov reported on modern aims in the use of organic reagents; A. K. Babko showed at the example of halide and thiocyanate complexes the correlation between the stability of complexes and the position of the corresponding central atoms in the periodic

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system. V. M. Peshkova and I. M. Bochkova lectured on the stability of oximates of Cu, Co, and Ni as depending on the structure of the oxime molecule. V. P. Toropova lectured on the double character of reaction of some compounds in the formation of complexes. The problem of the application of heteropolyacids in analytical chemistry was dealt with in the lectures of Z. F. Shakhova and co-workers, and A. I. Kokorin and N. A. Polotebnova. A large number of lectures dealt with the use of new organic reagents in analysis: A. I. Busev and M. I. Ivanyutin reported on the application of dialkyl and diaryl dithiophosphoric acid for the separation of elements, A. I. Portnov used aryl arsonic acid and aryl phosphinic acid. S. P. Lastovskiy and his co-workers treated some properties of new complexons. The lectures of V. A. Nazarenko, G. G. Shitareva and A. I. Kononenko dealt with the photometric determination of a series of elements using fluorine derivates. A. I. Cherkesov lectured on the use of halochromation in analytical chemistry. E. M. Dobkina and I. M. Malyutina lectured on the determination of tantalum using differential spectrophotometry. Yu. Ya. Morachevskiy and L. A. Stolyarova reported on new highly sensitive analysis methods using an ultraviolet microscope. Several lectures dealt with

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methodical and theoretical problems of spectrum analysis (N. F. Zakhariy and G. A. Shernin; E. Ye. Vaynshteyn and co-workers). N. S. Poluektov and M. I. Nikonova treated the perfection of flame photometry. Several lectures dealt with the determination of elements by polarography (S. I. Sinyakova; I. B. Rozhdestvenskaya and I. A. Yarovay; Ya. P. Gokhshteyn). New results in using fixed electrodes were reported by Y. D. Panchenko and Yu. S. Lyalikov and co-workers. The lecture of E. I. Udal'tsova and P. N. Paley treated the use of amperometric titration with two electrodes in the chemistry of uranium and thorium. N. N. Senyavin showed possibilities of predicting the conditions of chromatographic separation of elements based on their position in the periodic system. T. A. Belyavskaya reported on the use of ion exchange in the investigation of the state of substances in solutions. A. S. Yeznidub and V. I. Petrashen' lectured on the chromatographic separation of a series of elements, N. G. Polyanskiy reported on adapting the properties of ion exchanger resins, F. M. Shemyakin and associates reported on the chromatographic proof of sulfanilamide preparations in liquids of the organism. G. L. Starobinets and associates treated

Card 3/4

the application of high polymers in chromatographic analysis. The lecture of A. A. Zhukhovitskiy and N. M. Turkel'taub, G. Shay dealt with gas chromatography. Several lectures treated the use [illegible] radioactive isotopes for the chromatographic investigation of complex formation (D. I. Ryabchikov and associates), for the investigation of the co-precipitation mechanism of ions of rare metals with sulfides (N. A. Rudnev) and for determining rare elements by means of isotope dilution (I. P. Alimarin, G. N. Bilimovich). In the field of [illegible] organic microanalysis the lectures of N. G. Korshun, [illegible] and V. A. Klimova with associates have to be mentioned, who treated the elaboration of rapid micromethods for the simultaneous determination of several elements from one weighed [illegible] of boron, fluorine and [illegible] and [illegible].

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

KORENMAN, Izrail' Mironovich; VINOGRADOV, A.P., akademik, glavnyy red.; BUSHEV, A.I., prof., red.toma; ALIMARIN, I.P., red.; BABKO, A.K., red.; VAYNSHTEYN, E.Ye., red.; YERMAKOV, A.N., red.; KUZNETSOV, V.I., prof., red.; PALEY, P.N., red.; RYABCHIKOV, D.I., red.; TANANAYEV, I.V., red.; CHERNIKHOV, Yu.A., red.; VOLYNETS, M.P., red.izd-va; KASHINA, P.S., tekhn.red.

[Analytical chemistry of thallium] Analiticheskaia khimiia talliia. Moskva, Izd-vo Akad.nauk SSSR, 1960. 170 p. (MIRA 14:3)

(Thallium--Analysis)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

BAKHMAN, Varvara Ivanovna; OVSYANNIKOVA, Klavdiya Andreyevna; NEVRAYEV, G.A., red.; PALEY, P.N., red.

[Analysis of therapeutic muds (peloids)] Analiz lechebnykh griazei (peloidov). Moskva, Medgiz, 1960. 130 p.
(BATHS, MOOR AND MUD) (MIRA 13:9)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

YELINSON, Samuil Vladimirovich; PETROV, Karl Ivanovich; PALEY, P.N., nauchnyy red.; PCHELINTSEVA, G.M., red.; MAZEL', Ye.I., tekhn.red.

[Zirconium; chemical and physical methods of analysis] TSirkonii; khimicheskie i fizicheskie metody analiza. Moskva, Izd-vo glav.upr.po ispol'zovaniiu atomnoi energii pri Sovete Ministrov SSSR, 1960. 211 p. (MIRA 13:7)
(Zirconium)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

BAKHMAN, Varvara Ivanovna; KRAPIVINA, Sof'ya Sergeyevna; FLORENSKIY, Kirill Pavlovich; PALEY, P.N., prof., red.; GROSSMAN, I.L., tekhn.red.

[Analysis of mineral waters] Analiz mineral'nykh vod. Izd.2. Moskva, Gos.nauchno-issl. in-t kurortologii i fizikoterapii, 1960. 223 p. (MIRA 13:5)
(Mineral waters--Analysis)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

RYABCHIKOV, Dmitriy Ivanovich; GOL'BRAYKH, Yevgeniya Kas'yanovna; VINOGRADOV, A.P., akademik, glavnyy red.; ALIMARIN, I.P., red.toma; PALEY, P.N., red.toma; BABKO, A.K., red.; BUSEV, A.I., red.; VAYNSHTEYN, E.Ye., red.; YERMAKOV, A.N., red.; KUZNETSOV, V.I., red.; TANANAYEV, I.V., red.; CHERNIKHOV, Yu.A., red.; TRIFONOV, D.N., red.izd-va; POLENOVA, T.P., tekhn.red.

[Analytical chemistry of thorium] Analiticheskaia khimiia toriia. Moskva, Izd-vo Akad.nauk SSSR, 1960. 295 p. (MIRA 13:10)
(Thorium--Analysis)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, P.N.; NEMODRUK, A.A.; PYZHOVA, Z.I.

Photometric determination of boron in zirconium and its alloys with niobium. Trudy kom. anal. khim. 11:223-230 '60. (MIRA 13:10)

1. Institut geokhimii i analiticheskoy khimii im. V.I.Vernadskogo AN SSSR.
(Boron--Analysis) (Zirconium--Analysis) (Zirconium-niobium alloys)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, P.N.; UDAL'TSOVA, N.I.

Amperometric titration of small amounts of thorium with a solution of complexon III. Trudy kom. anal. khim. 11:299-305 '60.
(MIRA 13:10)

1. Institut geokhimii i analiticheskoy khimii im. V.I. Vernadskogo AN SSSR.

(Thorium--Analysis) (Acetic acid)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

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68104
SOV/78-5-1-6/45

AUTHORS: Kabanova, O. L., Paley, P. N.

TITLE: The Redox Potentials of Plutonium 19 in Acid Solutions With Different Ionic Strengths

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 1, pp 31 - 34 (USSR)

ABSTRACT: The authors report on the influence of the concentration of chloric acid, hydrochloric acid, and potassium chloride, i.e., monovalent electrolytes (investigated by them between 1950 and 1952) on the redox potential E_f of the system Pu(III)/Pu(IV). (Abstracter's note: The authors refer to chloric acid; in formulas, however, they always write $HClO_4$). E_f was measured by the compensation method by means of a PPTV-1 potentiometer. The solution was liberated from oxygen by passing purified nitrogen through it before the emf was measured. The concentration of Pu(III) and Pu(IV) was determined by spectrophotometry. Figure 1 shows the dependence of E_f on the concentration of $HClO_4$, HCl, and 1 mol of HCl + 0.5 - 3.8 mol of KCl. Figure 2 shows the absorption spectra of $PuCl_4$ in HCl or HCl + KCl, and figure 3 the

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dependence of E_f on the concentration of the chlorine ion. It was found that the redox potential of the system Pu(III)/Pu(IV) at 25° in 0.5-4 M $HClO_4$ increased with increasing acid concentration. In solutions with HCl (1-5 M) and HCl + KCl (composition as mentioned above), the redox potential becomes more negative with increasing chloride concentration. If the concentration of the chlorine ion is ten times increased, E_f decreases by 0.058 ± 0.007 v. The complex ions $PuCl^{3+}$ and $PuCl_2^{2+}$ are formed. Their stability constants are 0.8 and 0.3, respectively. The system Pu(III)/Pu(IV) has a current density of more than 10^{-5} - 10^{-4} a/cm^2 on a platinum electrode in 0.8 N HCl at room temperature and with a concentration of 10^{-3} M Pu. There are 3 figures and 17 references, 1 of which is Soviet.

SUBMITTED: September 1, 1958

Card 2/2

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, P.M.; UDAL'TSOVA, N.I.

Use of the "dead-stop end point" titration method in a study of uranium (VI) complexes. Zhur. neorg. khim. 5 no.10:2211-2215 O '60. (MIRA 13:10)
(Uranium compounds)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, P.N.; UDAL'TSOVA, N.I.

Solubility of ethylenediaminetetraacetic acid in water, hydrochloric acid solutions, sodium chloride, and potassium chloride. Zhur. neorg. khim. 5 no.10:2315-2318 O '60. (MIRA 13:10)
(Acetic acid)

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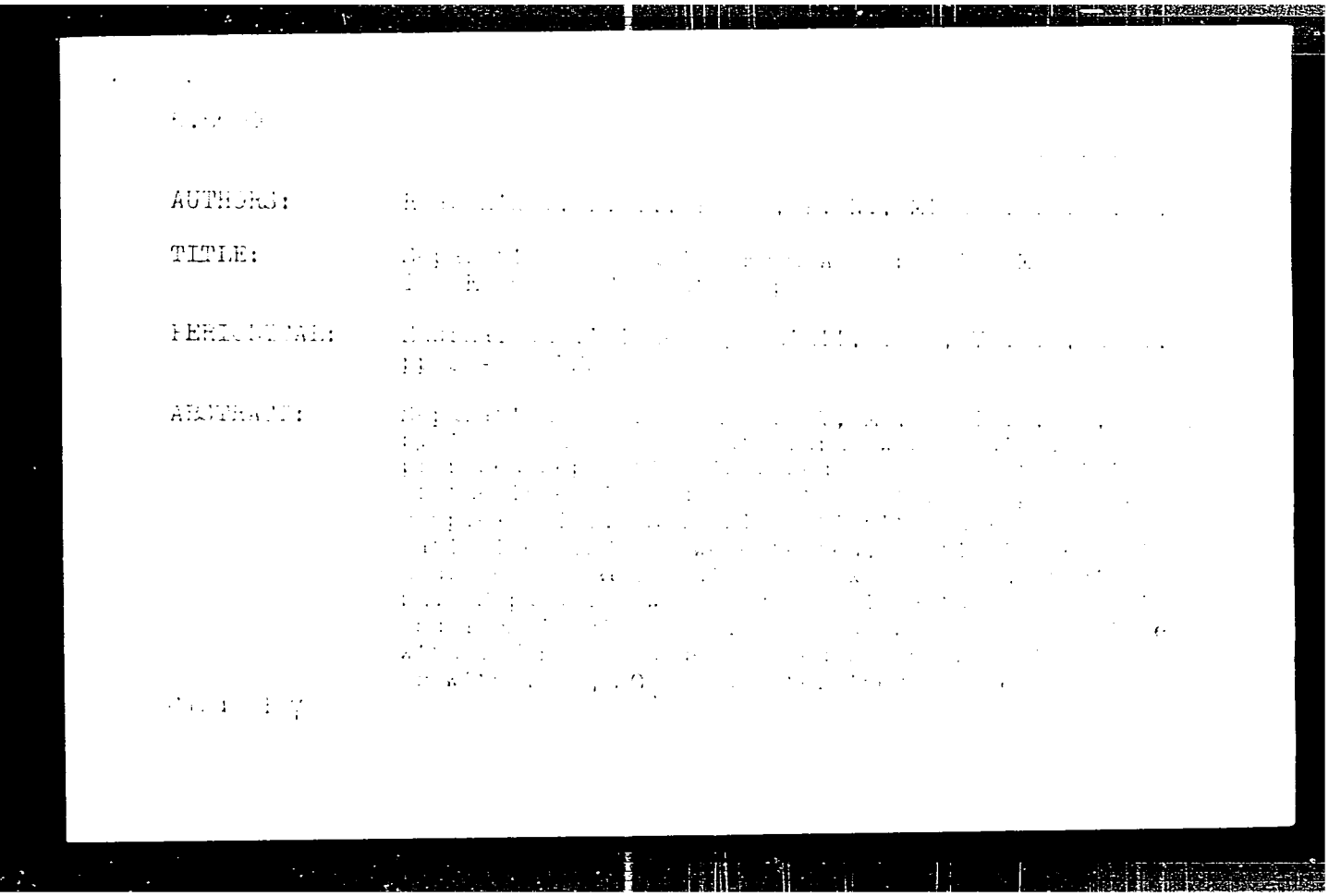
"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238



AUTHOR:

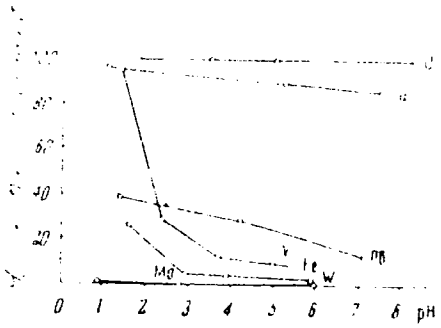
TITLE:

PERIODICAL:

ABSTRACT:

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238



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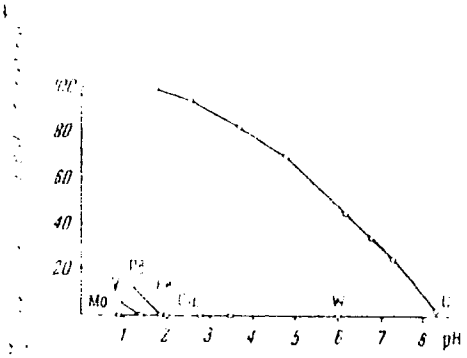
Separation [illegible]
Metals by Ion Ex[illegible]



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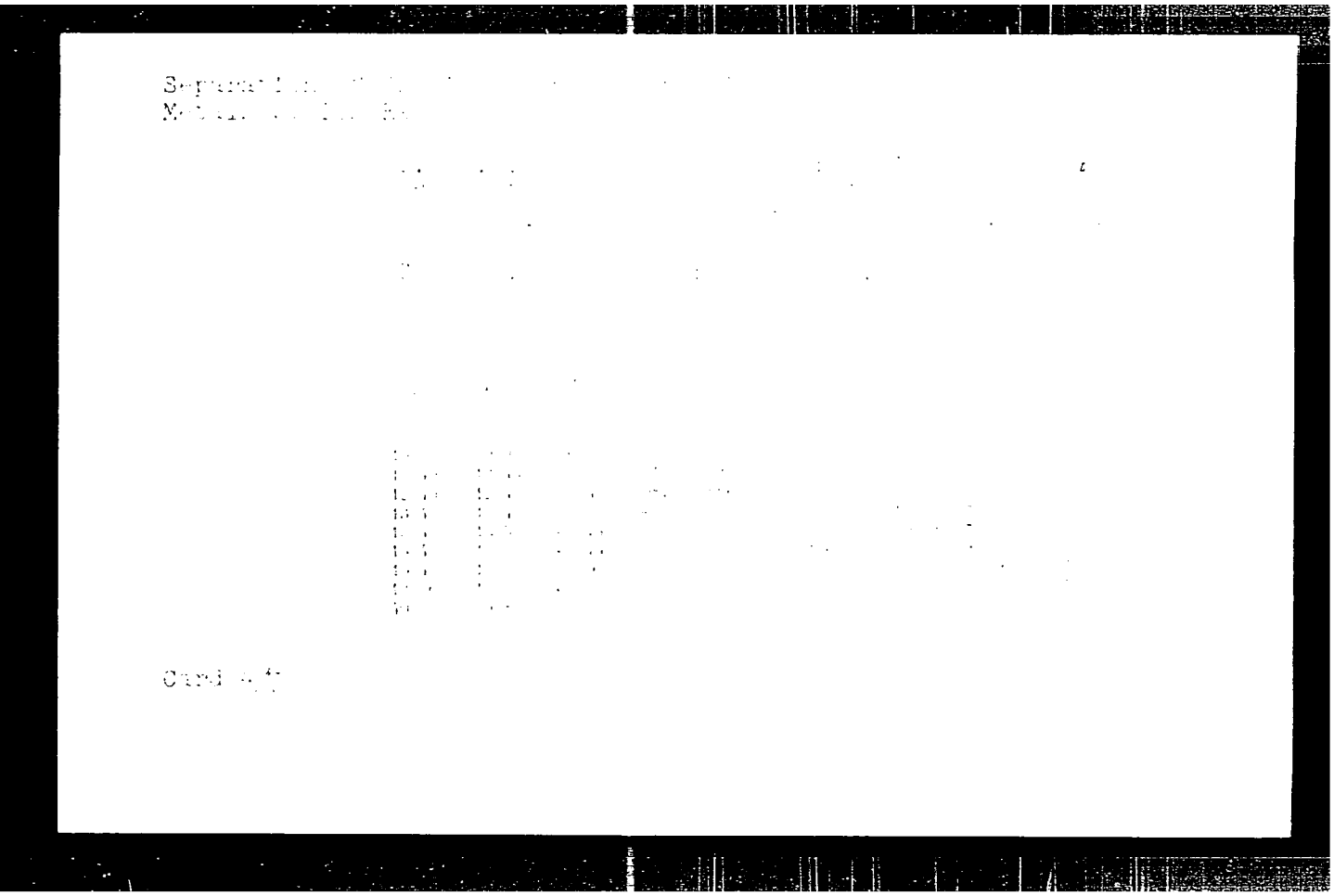

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

Separation of Uranium

Metals by Ion Ex

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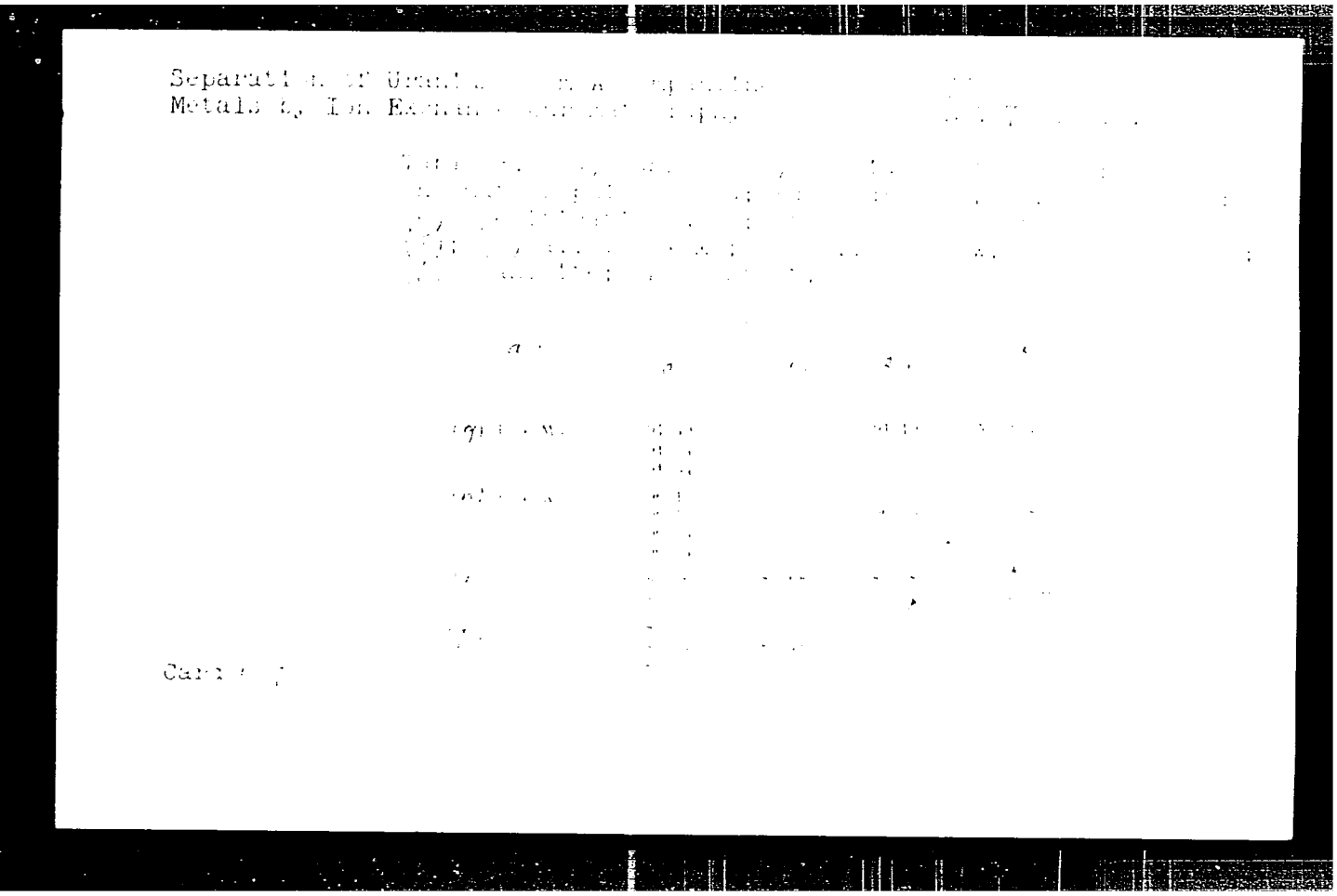

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Separation of
Metals by Ion

ASSOCIATION:

SUBMITTED:
June 7/7

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, P.N.; CHZHAN VEN'-TSIN [Chang Wên-ch'ing]

Complexometric determination of tetravalent plutonium with arsenazo.
Zhur. anal. khim. 15 no.5:598-600 S-O '60. (MIRA 13:10)

1. V.I.Vernadsky Institute of Geochemistry and Analytical Chemistry, Academy of Sciences, U.S.S.R., Moscow.
(Plutonium--Analysis) (Arsenazo)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

S/075/60/015/004/004/XX
B020/B066

AUTHORS: Paley, I. M. and Vlaltsva, N. I.

TITLE: Reducing Properties of Ethylene Diamine Tetraacetic Acid

PERIODICAL: Zhurnal analiticheskoy khimii, 1960, Vol. 15, No. 4, pp. 668-670

TEXT: It is known from publications that Ce^{IV}, Mn^{VII}, V^{V}, $S_2O_8^{2-}$, and others, oxidize ethylene diamine tetraacetic acid (Komplexon II) under certain conditions. The present paper deals with a thorough investigation of the reducing properties of ethylene diamine tetraacetic acid and its salts. The authors used for this purpose: 1) sodium ethylene diamine tetraacetate (molecular weight 372.2) purified by precipitation by means of methyl alcohol from aqueous solution, and ethylene diamine tetraacetic acid obtained from the sodium salt; 2) solutions of oxidizing agents. 0.043 M $Ce(SO_4)_2$, 0.080 M ammonium vanadate, and 0.100 M potassium permanganate; 3) 0.027 and 0.05 M solutions of Komplexon III. The experiments showed that the permanganate ion can be quantitatively titrated in 1 - 2 N

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

Reducing Properties of Ethylene Diamine Tetraacetic Acid

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B020/B066

sulfuric acid solution with a solution of Komplexon III (and vice versa). The end point of titration was confirmed visually from the disappearance of the permanganate color. The titration results are presented in Table 1. Table 2 gives the results of titration of a 0.043 M $Ce(SO_4)_2$ solution with a 0.050 M Komplexon III solution at pH 1 - 1.5 in the cold and on heating. In the oxidation of Komplexon II with Mn^{VII}, V^{V}, etc., carbon dioxide is liberated. The results of the quantitative determination of carbon dioxide obtained from Komplexon III oxidation by the gravimetric method (by means of CO_2 absorption by Ascarite) are summarized in Table 3. With increasing ratio of oxidizing agent (Ce^{IV} or Mn^{VII}) to Komplexon II, the number of CO_2 molecules set free per one molecule of Komplexon III increases (Table 3).

The ethylene diamino tetraacetic acid molecule is decomposed in acid solution under separation of four CO_2 molecules. The ethylene diamine tetraacetic acid was found to oxidize with an excess of 30% H_2O_2 solution both in acid and alkaline solution. The reaction, however, proceeds quickly and quantitatively only when the solution is boiled. It may be summarized that Komplexon II reacts with Mn^{VII} (in 1 - 2 N H_2SO_4) at the ratio of 1 mole of Komplexon II to 8 gram-equivalents of oxidizing agent; in the

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

Reducing Properties of Ethylene Diamine Tetraacetic Acid

case of cerium^{IV}, this ratio holds only for heating. V^{V} and Cr^{VI} are reduced in acid solution only when treated in the presence of Komplexon II. The formation of formaldehyde (Ref. 8) was polarographically confirmed in the oxidation products of ethylene diamine tetraacetic acid with PbO_2; furthermore, condensation products of formaldehyde with amines, which also result in the oxidation of Komplexon, are assumed to be formed. There are 1 figure, 2 tables, and 8 references, 2 Soviet, 1 Swiss, 2 German, 1 Dutch, 1 German, and 1 US

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo AN SSSR, Moskva (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy of the AS USSR Moscow)

SUBMITTED: June 1[illegible], 1960

Card 3/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

S/186/61/003/002/009/018
E142/E435

5.5300

AUTHORS: Paley, P.N., Nemodruk, A.A. and Davydov, A.V.

TITLE: Rapid extraction - photometric determination of uranium with the reagent arsenazo III

PERIODICAL: Radiokhimiya, 1961, Vol.3, No.2, pp.181-186

TEXT: Rapid methods of analysis are very important during the determination of uranium in ores, minerals and other samples and in complex solutions. The simplest and most rapid method is the direct determination of the element in the samples without preliminary separation of other elements which might interfere with the reaction. However, since such methods have not been discovered hitherto the inhibiting elements have to be separated by extraction. Uranium can be separated by a one-stage extraction process by using tributyl phosphate. The described method comprises: preliminary extraction of uranium with a 20% solution of tributyl phosphate in carbon tetrachloride whilst using ammonium nitrate as a salting-out agent and complexone III for retaining inhibiting elements in the aqueous phase; the uranium is then re-extracted with arsenazo III-solution and photometric

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E142/E435

measurements are carried out. Quantities of 0.002 to 1.5 γ/ml can be determined in the tested samples as the element can be concentrated during the processes of extraction and re-extraction. Arsenazo III was found to be the most satisfactory reagent for the photometric determination (amongst such reagents as arsenazo I, arsenazo II, pyrocatechol violet, morin, and toron); it has a high degree of selectivity and sensitivity. Moreover, complete re-extraction of uranium is achieved and the optical density of the obtained re-extracts does not depend on changes in the concentration of the acid (within fairly wide limits). These advantages are due to the increased intensity of the coloured complex formed by arsenazo III with uranium which, according to data by S.B.Savvin (DAN SSSR, 127, 6, 1231 (1959)), has a 8000 times higher strength than the corresponding complex with arsenazo I. Maximum coloration during the determination of U^{VI} occurs already at pH = 1.7 whereas with the other abovementioned reagents it only sets in at pH = 6. A photo-electrocollimator ФЭК-Н-57 (FEK-N-57) with a red lightfilter No.8 (effective wavelength: 656 mμ) or a spectrophotometer (655 mμ) were used during these experiments.

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

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E142/E435

Rapid extraction ...

With the photo-electrocollimator, the experimental error does not exceed 3.3%. If a spectrophotometer is used, the accuracy of determination is somewhat higher. If the solution to be analysed contains larger quantities of fluorides or phosphates, extraction must be carried out by using a 40% solution of aluminium nitrate as salting-out agent, which does not contain complexone III. The obtained extract is then washed with 20 ml of a 50% solution of ammonium nitrate (pH = 3) which is saturated with complexone III. There are 1 figure, 3 tables and 12 references: 7 Soviet-bloc and 5 non-Soviet-bloc. Four of the references to English language publications read as follows: G.H.Morrison, H.Freiser. Solvent Extraction in Analytical Chemistry. N.Y. (1957); J.Clinch, M.Guy, Analyst, 82, 850 (1957); Z.I.Dizdar, I.D.Obrenović, Analyst, 83, 177 (1958); Z.I.Dizdar, I.D.Obrenović, Second UN International Conference on the Peaceful Uses of Atomic Energy, 1958, p.471.

SUBMITTED: May 6, 1960

Card 3/3

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, P.N.; SYUY LI-YUAN' [Hsü Li-yüan]

Complex formation of uranyl with trihydroxyglutaric acid. Zhur. neorg.khim. 6 no.10:2406-2413 O '61. (MIRA 14:9)

1. Institut geokhimii i analiticheskoy khimii imeni V.I.Vernadskogo AN SSSR.

(Uranyl compounds) (Glutaric acid)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, P.N.; SYUY LI-YUAN'

Complex formation of uranium (IV) with complexon III. Zhur.neorg.-khim. 6 no.12:2649-2653 D '61. (MIRA 14:12)
(Uranium compounds) (Complexons)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

88580

S/075/61/016/001/009/019
B013/B055

21.3000

AUTHORS: Paley, P. N. and Syuy Li-yuan'

TITLE: Complexonometric Titration of Tetravalent Uranium Using Thoron as Indicator

PERIODICAL: Zhurnal analiticheskoy khimii, 1961, Vol. 16, No. 1, pp. 51-56

TEXT: The authors of the present publication studied the conditions for the complexonometric titration of uranium(IV) using Thoron as indicator. Uranium(IV) was obtained by reducing uranyl ions in dilute chloric acid solution at a mercury cathode. The use of Thoron as indicator makes it possible 0.1 - 50 mg of uranium to be titrated satisfactorily with Complexone III at pH 1.5 (Tab. 1). Addition of 6 - 10 drops of the indicator solution and heating the solution to 30°C produces a distinct color change at the end point of the titration. The influence of the acidity was studied by measuring the pH after the titration by means of a glass electrode in an LP-5 potentiometer. At a pH of 1.0 - 1.8 the analytical results were satisfactory (Tab. 2). Table 3 illustrates the influence of various elements on the titration of uranium(IV) at pH 1.5 with Complexone III using Thoron

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Complexonometric Titration of Tetravalent Uranium Using Thoron as Indicator

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as indicator. Alkali- and alkaline-earth metals, zinc, manganese(II), aluminum, lead, lanthanum, and cadmium do not interfere. This is also true of cerium(III) and up to 2.5 mg of nickel, up to 50 mg of iron(II), as well as nitrates, chlorides, and acetates. Thorium, bismuth, zirconium, titanium(III) and (IV), cobalt, copper, mercury, vanadium, chromium(III), tin(II), molybdenates, tungstates, arsenates, sulfates, and fluorides interfere to a slighter or greater extent. The interference by fluorides can be eliminated by the addition of an aluminum salt (Tab. 4). This fact rendered it possible to work out a procedure for the determination of uranium in uranium tetrafluoride (Tab. 5) which yields good results. There are 5 tables and 37 references: 8 Soviet, 3 Czech, 2 British, 2 Indian, 4 German, 4 Dutch, 1 Swiss, 5 US, 1 Japanese, and 1 Chinese.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo AN SSSR, Moskva (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy of the Academy of Sciences USSR, Moscow)

SUBMITTED: June 15, 1959

Card 2/2

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

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21.3000

S/075/61/016/001/010/013
B013/B055

AUTHORS: Paley, P. N. and Bezrogova, Ye. V.

TITLE: Spectroscopic Determination of Beryllium Traces in Uranium

PERIODICAL: Zhurnal analiticheskoy khimii, 1961, Vol. 16, No. 1, pp. 57-59

TEXT: The present publication describes a method of determining 10^{-6}% of beryllium in uranium. The first step consists of separating the beryllium traces from the uranium. Of various known methods of separating beryllium from uranium, the chromatographic separation on a cationite using various complexing agents is the most promising (Refs. 14-17). The authors determined the optimum conditions for the separation. Separation is satisfactory on a KY-2 (KU-2) cationite with 0.25 mm grain size. Beryllium comes off the column with a sulfosalicylic acid solution, the most suitable rate of elution being 0.5 ml/min. The quantity of exchange resin used is of great significance. A 10-mm diameter column must contain at least 10 g of KY-2 (KU-2) resin in the air-dry state per 1 g of sample. One of the determining factors of separation is the pH of the wash-out solution which should be 3. Deviations are permissible only towards smaller values. The possibility of

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Spectroscopic Determination of Beryllium Traces in Uranium

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B013/B055

completely separating was tested using uranium solutions containing between 10^{-2} and 10^{-3}% of beryllium. The results obtained were satisfactory (Tab. 1). To determine smaller quantities of beryllium, the latter not only must be separated from uranium, but also must be concentrated. Two series of beryllium determination experiments were carried out, the one using the fluorescence of beryllium, the other employing spectral analysis. The fluorescence method was found to be unsuitable. Basing on results obtained by spectroscopic analysis (Tab. 2), the authors suggest a combined method for determining beryllium in uranium down to 10^{-6}% beryllium, consisting in chromatographic enrichment of beryllium and subsequent spectroscopic analysis. The time required for one analysis is ~40 h. The error is ±20%. There are 2 tables and 17 references: 6 Soviet, 2 Dutch, 2 Swiss, 3 US, 1 Austrian, 1 Japanese, and 2 Czech.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo AN SSSR, Moskva (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy of the Academy of Sciences USSR, Moscow)

SUBMITTED: July 13, 1959

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, P.N.; UDAL'TSOVA, N.I.

Breaking down ethylenediaminetetraacetic acid by oxidation with hydrogen peroxide. Zhur.anal.khim. 16 no.5:649-650 S-O '61. (MIRA 14:9)

1. Vernadsky Institute of Geochemistry and Analytical Chemistry, Academy of Sciences U.S.S.R., Moscow.
(Acetic acid) (Oxidation)

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"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

BUSEV, Aleksey Ivanovich; VINOGRADOV, A.P., akademik, glav. red.; ALIMARIN, I.P., red.; BABKO, A.K., red.; VAYNSHTEYN, E.Ye., red.; YERMAKOV, A.N., red.; KUZNETSOV, V.I., red.; PALEY, P.N., red.; RYABCHIKOV, D.I., red.; TANANAYEV, I.V., red.; CHERNIKHOV, Yu.A., red.; VOLYNETS, M.P., red.; MAKUNI, Ye.V., tekhn. red.

[Analytical chemistry of molybdenum]Analiticheskaia khimiia molibdena. [By] A.I.Busev. Moskva, Izd-vo Akad. nauk SSSR, 1962. 300 p. (MIRA 16:1)

(Molybdenum--Analysis)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

UDAL'TSOVA, N.I.; SAVVIN, S.B.; NEMODRUK, A.A.; NOVIKOV, Yu.P.; DOBROLYUBSKAYA, T.S.; SINYAKOVA, S.I.; BILIMOVICH, G.N.; SEDYUKOVA, A.S.; BELYAYEV, Yu.I.; YAKOVLEV, Yu.V.; NEMODRUK, A.A.; CHMUTOVA, M.K.; GUSEV, N.I.; PALEY, P.N.; VINOGRADOV, A.P., akademik, glav. red.; ALIMARIN, I.P., red.; BABKO, A.K., red.; BUSEV, A.I., red.; VAYNSHTEYN, E.Ye., red.; YERMAKOV, A.N., red.; KUZNETSOV, V.I., red.; RYABCHIKOV, D.I., red. toma; TANANAYEV, I.V., red.; CHERNIKHOV, Yu.A., red.; SENYAVIN, M.M., red. toma; VOLYNETS, M.P., red.; NOVICHKOVA, N.D., tekhn. red.; GUS'KOVA, O.M., tekhn. red.

[Analytical chemistry of uranium] Analiticheskaia khimiia urana. Moskva, Izd-vo Akad.nauk SSSR, 1962. 430 p. (MIRA 15:7)

1. Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii.

(Uranium—Analysis)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PAL'SHIN, Ye.S.; MYASOYEDOV, B.F.; PALEY, P.N.

Extraction-photometric method for the determination of pentavalent protactinium with arsenazo III. Zhur.anal.khim. 17 no.4:471-475 Jl '62. (MIRA 15:8)

1. V.I.Vernadsky Institute of Geochemistry and Analytical Chemistry, Academy of Sciences, U.S.S.R., Moscow.
(Protactinium--Analysis)

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

PALEY, P.N.; KARALOVA, Z.K.

Effect of fluorides on the determination of uranium in the presence of beryllium. Zhur.anal.khim. 17 no.4:528-529 Jl '62. (MIRA 15:8)
(Uranium—Analysis) (Fluorides) (Beryllium)

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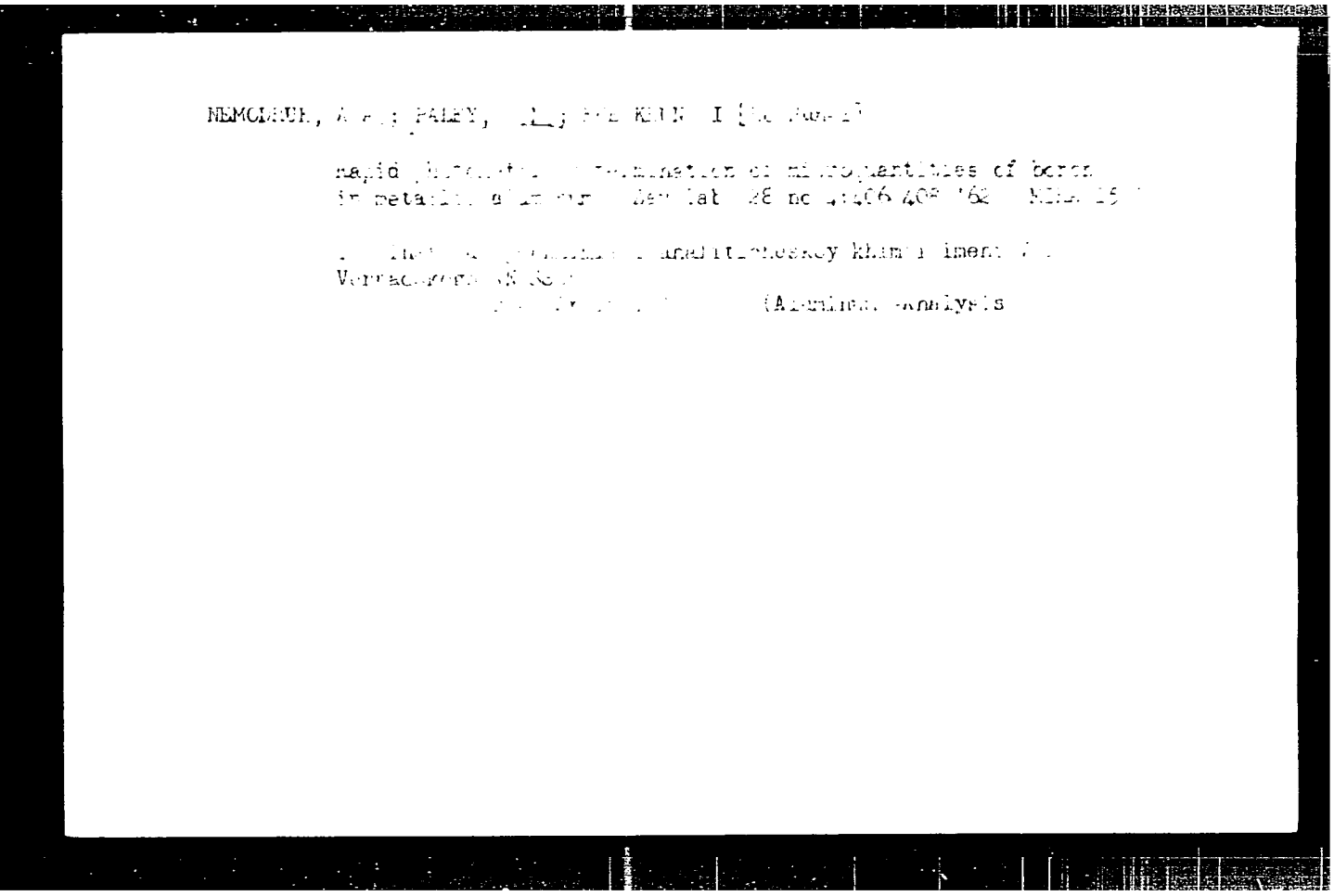

NEMODRUK, A [illegible]; PALEY, [illegible]; [illegible] I [illegible]

rapid [illegible] determination of microquantities of boron in metallic [illegible] Zav lab 28 no 4:406-408 '62 MIRA 15

[illegible] analiticheskoy khimii imeni [illegible] Vernadskogo AN SSSR

[illegible] (Aluminum--Analysis

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

S/186/63/005/002/002/005
B075/B136

AUTHORS: Khalkin, V.A., Paley, P.N., and Nemodruk, A.A.

TITLE: Extraction of tetravalent plutonium from nitric acid solutions by oxygen-containing extractants

PERIODICAL: Radiokhimiya, v.5, no.2, 1963, 215-222

TEXT: Extraction of Pu(IV) was studied in relation to equilibrium concentration of HNO_3 in the aqueous phase in the absence of salting-out agents. Dibutyl and diethyl ethers, diethylketone, methyl n-butylketone, methylisobutylketone, butyl formate, ethyl acetate, butylacetate and benzaldehyde were used as extractants. At small HNO_3 concentrations (1 to 2.5 M) no extraction of Pu takes place. At higher acidities the distribution coefficients increase rapidly and reach the maximum values for HNO_3 concentrations in the aqueous phase between 4 and 10 M, depending on the extractant. Diethyl ether was the most effective extractant, the distribution coefficient for it being 11.5 for 5 M HNO_3 in the aqueous phase and 3.4M in the organic phase. The distribution coefficients do not depend on the quantity of Pu in solution in

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Extraction of tetravalent plutonium...

the range 0.004 γ/m to 4 mg/ml. It is shown that $Pu^{(IV)}$ is extracted in the form

$$\left[\begin{matrix}R\\R\end{matrix}\!>\!COH\right]_2\ \left[Pu(NO_3)_6\right]$$

There are 6 figures and 3 tables.

SUBMITTED: January 26, 1962

Card 2/2

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

L 36978-65 EWT(m)/EPF(c)/EPR/EPF(n)-2/EWP(t)/EWP(b) Pr-4/Ps-4/Pu-4 IJP(c)
ACCESSION NR: AP4043854 S/0186/64/006/004/0459/0463 JD/NW/JW/JG

AUTHOR: Paley, P. N.; Nemodruk, A. A.; Deberdeyeva, R. Yu. 34 B

TITLE: Determination of uranium in fluoride-chloride solutions

SOURCE: Radiokhimiya, v. 6, no. 4, 1964, 459-463

TOPIC TAGS: uranium determination, colorimetric analysis, tributyl phosphate, uranium extraction, aluminum nitrate, sodium tartrate, arsenazo III

ABSTRACT: The authors report a rapid method (requiring only 8-10 minutes) for the colorimetric determination of small amounts of uranium in acidic solutions containing large amounts of ammonium, fluoride and chloride ions, as well as small amounts of other ions (sulfate, phosphate and various metals). This method involves extraction of the uranium with a solution of 100 ml tributyl phosphate in 400 ml toluene, using aluminum nitrate to bind the fluoride ions. The uranium is then reextracted from the tributyl phosphate solution by sodium tartrate, and determined colorimetrically by reaction with 0.25% arsenazo III in the presence of 6 N HNO_3. Control studies showed that the overall error can reach 20% if the original uranium concentration is 0.05-0.5 mg/liter, but is only 10% at higher uranium

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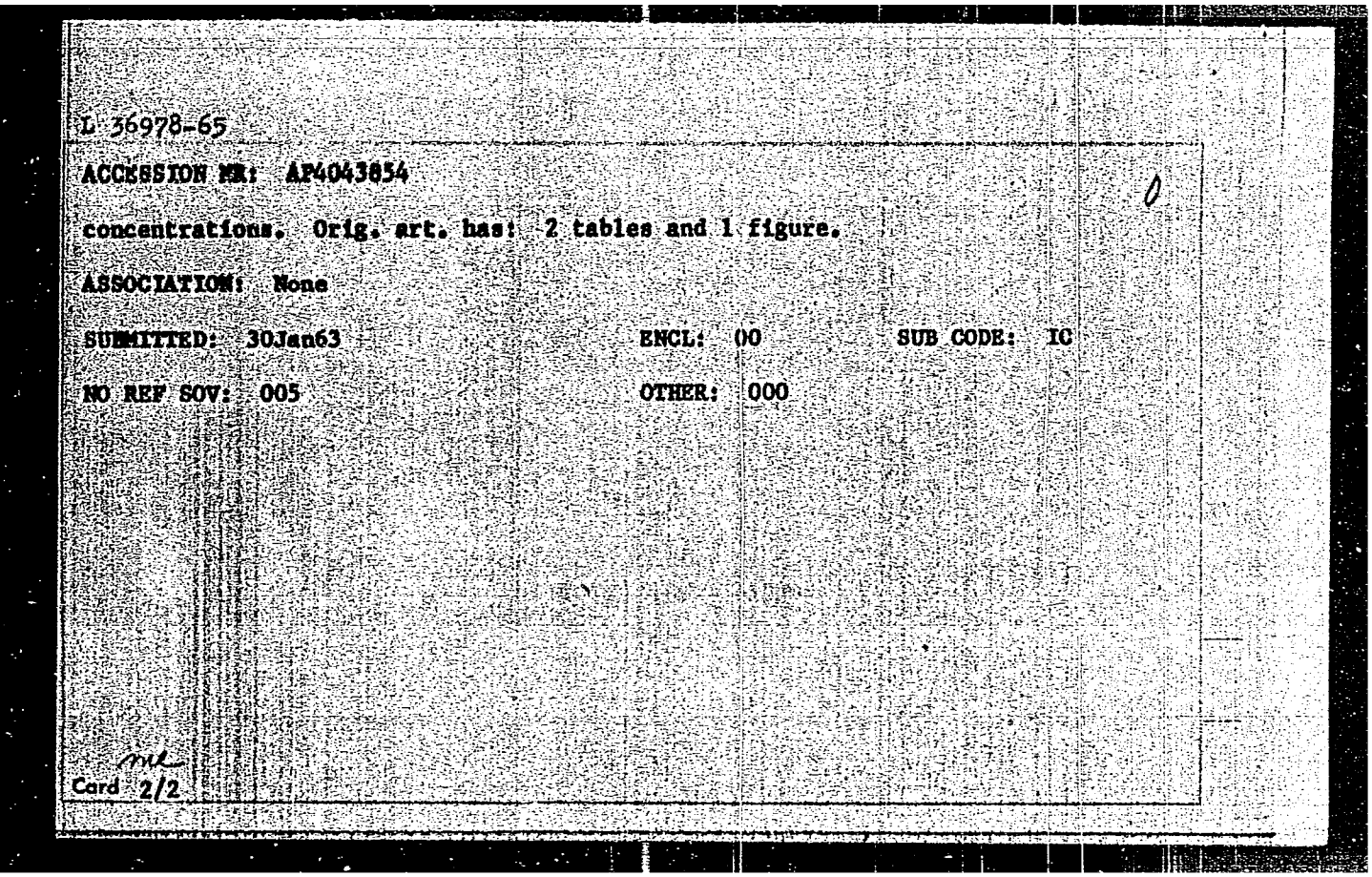

L 36978-65

ACCESSION NR: AP4043854

concentrations. Orig. art. has: 2 tables and 1 figure.

ASSOCIATION: None

SUBMITTED: 30Jan63 ENCL: 00 SUB CODE: IC

NO REF SOV: 005 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

L 12108-66 EWT(1)/EWT(m)/EPF(n)-2/EWP(t)/EWP(b) IJP(c) JD/WW/JG/GS
ACC NR: AT5026380 SOURCE CODE: UR/0000/65/000/000/0144/0156

AUTHOR: Nemodruk, A. A.; Paley, P. N.

ORG: None

TITLE: New photometric methods of determining actinides

SOURCE: AN SSSR. Institut geokhimii i analiticheskoy khimii. Sovremennyye metody analiza; metody issledovaniya khimicheskogo sostava i stroyeniya veshchestv (Modern methods of analysis; methods of investigating the chemical composition and structure of substances), 144-156

TOPIC TAGS: nuclear fuel, photometric analysis, plutonium, neptunium, protactinium, uranium, thorium, ANALYTIC CHEMISTRY

ABSTRACT: Photometric methods are quite extensively used for the determination of thorium and uranium, but only rarely for such actinide elements as plutonium, neptunium, and protactinium, because radiometric methods have proven more sensitive and selective. However, the recent development of new reagents has altered the role of photometric methods. Data presented and discussed in the present article show that the sensitivity of photometric methods in the determination of Th, Pa, U, Np, and Pu with arsenazo III and chlorophosphonazo III exceed the

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L 12108-66

ACC NR: AT5026380

sensitivity of the determination of these elements as compared to other reagents by almost one order of magnitude. Furthermore, the sensitivity may be considerably increased by preliminary concentration by extraction, coprecipitation, or chromatographic methods. It is noted that the high sensitivity of the new photometric methods of determination is accompanied by a high degree of selectivity. The ability of arsenazo III and chlorophosphonazo III to react with actinide elements in highly acid solutions has great advantages over other methods since hydrolysis is completely excluded under these conditions. Other advantages of the method include simplicity and the resultant short duration of the process, in some cases lasting no more than 5—7 minutes. The advantages of the new photometric methods presented indicate possibilities of their application in various stages in the search and production of actinide elements, particularly in the automatic control of the production of nuclear fuel. Orig. art. has: 5 figures and 7 tables.

SUB CODE: 11, 07 / SUBM DATE: 05Jul65 / ORIG REF: 020 / OTH REF: 002

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L 35836-66 EWT(m)/EWT(t)/ETI IJP(c) [illegible]

ACC NR: AP6016302 (N) SOURCE CODE: UR/0075/66/021/001/0126/0129

AUTHOR: Paley, P. N.; Karalova, Z. K.; Shibayeva, N. P.; Pyzhova, Z. I.

ORG: none

TITLE: Determination of ionium and total thorium isotopes in [illegible] materials

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 1, 1966, 126-12[illegible]

TOPIC TAGS: isotope separation, ionium, thorium, uranium compound, quantitative analysis, RADIOISOTOPE, CHEMICAL PURITY

ABSTRACT: The article reports a method for separating and purifying thorium isotopes, based on precipitation of calcium oxalate and anion exchange in a hydrochloric acid medium. The completeness of the precipitation of the thorium isotopes on the calcium oxalate, with a Th:U ratio of 1:40,000, was confirmed by experiments with synthetic mixtures. The radiochemical purity of the Th^{230} (ionium) separated out was confirmed by data from alpha-spectrometric analysis. The yield of the Th^{230} was 81-95%. As an example of the method, the article describes the separation of thorium isotopes from solid samples. Orig. art. has: 1 table.

SUB CODE: 18,07/ SUBM DATE: 08Jun64/ ORIG REF: 008 UDC: 543.70

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APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012388

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001238

L 44432-66 EWT(m)/EWP(t)/ETI IJP(c) DS/JD/WW/JG/RM
ACC NR: AP6024293 (N) SOURCE CODE: UR/0075/66/021/007/0874/0876

AUTHOR: Paley, P. N.; Karalova, Z. K.; Shibayev, N. P.; Pyzhova, Z. I.

ORG: none

TITLE: Separation of ionium ($^{230}_{90}$Th) from uranium, protactinium, iron, manganese, and europium by cation exchange

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 7, 1966, 874-876

TOPIC TAGS: ionium, iron, uranium, protactinium, manganese, europium, cation exchange, thorium isotope

ABSTRACT: A method has been suggested for separating ionium (thorium 230 isotope) from U, Pa, Fe, Mn, and Eu in an 0.1 N solution of H_2SO_4 by a KU-2 cation-exchange resin. The method is based on separate extraction of absorbed elements: first U, Fe, Mn, Eu, and Pa and extracted by a 2 N solution of HNO_3, then the resin is washed with a 1 N solution of H_2SO_4 to completely remove protactinium. Ionium is extracted by a saturated ammonium carbonate solution and measured radiometrically.

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ACC NR: AP7012444 SOURCE CODE: UR/0075/66/021 010 1217 1222

AUTHOR: Zolotov, Yu. A.; Chmutova, M. K.; Paley, P. N. -- Palei, P. N.

ORG: none

TITLE: Extraction of a chelate compound of plutonium (IV) with 1-phenyl-3-methyl-4-benzoylpyrazolone-5

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 10, 1966, 1217-1222

TOPIC TAGS: chelate compound, plutonium compound, solvent extraction

SUB CODE: 07

ABSTRACT: The authors studied the extraction of a chelate compound of Pu (IV); with 1-phenyl-3-methyl-4-benzoylpyrazolone-5 (PMBP) from solutions of nitric, hydrochloric and sulfuric acids. Plutonium was quantitatively extracted by a 0.1 *M* solution of PMBP in benzene from 1-7 *N* solutions of HNO_3 with nearly quantitative extraction from 1-7 *N* solutions of H_2SO_4. Consideration is given to the effect which solvents, PMBP and plutonium concentration and extraneous complexing agents have on extraction of plutonium from nitric acid solutions. Extraction is not affected by large quantities of acetates, oxalates, citrates and phosphates. Conditions were found for plutonium re-

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ACC NR: AP7012444

extraction. Complexing of plutonium with PMBP was studied and the stability constants of the complexes were determined. The data show that complexes of the PuA_i type are formed in the aqueous phase where A is the equilibrium concentration of free anions of PMBP in the aqueous phase and i=1-4. Orig. art. has: 1 figure, 1 formula and 6 tables. [JPRS: 40,422]

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