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Index of Chemistry & Analytical Reports Issued at Clinton Laboratories from November 8, 1943 to date.

LABORATORY REPORT
1957

DECLASSIFIED

CC-1024 Nov. 8, 1943

Chemistry Monthly, C-I, Perlman.
Production and Extraction of U²³³. Stoughton & Assoc.
Procedures for extraction of Pa²³³ and isolation of U²³³
effect of heating on Th carbonate; filterability of MnO₂
ppt; reducing agent for MnO₂; ether extraction of U²³³
from manganous nitrate soln; adsorption of Pa²³³ and U⁶
on filter.

CN-1025 Nov. 8, 1943

Chemistry Monthly, C-I, Perlman.
Production and Extraction of Plutonium. Decont. in LaF₃
crossover in BiF₄ process; LaF₃ conc. cycles (flowsheet);
reaction rates of H₂ on U; hydrofluorination of UH₃ and
powdered U metal; non-volatilization of Cb and Zr from
UH₃ during hydrofluorination; re-volatilization of higher
Pu fluoride; hydrofluorination of Cb₂O₅ containing Pu;
fluorination of Pu from CoF₃; method of process control
analysis.

CLASSIFICATION CANCELLED

Signature: *Dana R. Hamrin* Date: *10/19/09*
Single review of CCRP-declassified documents
as authorized by DOE Office of
Classification memo of August 22, 1994.

CC-1050 Nov. 3, 1943

Chemistry Monthly, C-II, Coryell.
Radiochemistry of the Fission Products. Tracer studies
and preparation of carrier-free tracers; long-lived ac-
tivity of element 43; long-lived Se activity; probable
absence of gamma in long-lived Rh; UX₂ beta radiations
from U foils.

CN-1051 Nov. 8, 1943

Chemistry Monthly, C-II, Coryell.
Contributions to Process Decontamination and Analysis.
Determination of Pu and rare earths in process solns;
scavenging expts. for process decontamination using
BiF₄, LaF₃, and MnO₂.

CN-1055 Nov. 3, 1943

Chemistry Monthly, C-II, Coryell.
Radiation Chemistry. Ether extraction method of getting
W conc. of fission products.

CC-1109 Dec. 11, 1943

Chemistry Monthly, C-II, Coryell.
Radiation Chemistry. Shapiro and Cannon. Effects of
radiation on glass, quartz, and masonite, etc.

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- CC-1110 Dec. 14, 1943 Chemistry Monthly, C-III, Boyd.
Report for Two-Month Period Ending Dec. 14, 1943.
Status of chem. analytical methods; service analyses; determination of Fe in presence of BiFO_4 ; determination of free HNO_3 in UNH soln; determination of uranous U by titration with ceric ammonium sulfate.
- CC-1111 Dec. 13, 1943 Chemistry Monthly, C-I, Perlman.
Production and Extraction of U^{233} . Schulze, Steahly, Stoughton. Results of preliminary runs; amount of natural U in Th carbonate; radiation from Pa^{233} ; adsorption-separation of Pa^{233} from Th ; diethyl ether extraction of tracer U from aqueous manganese nitrate solution.
- CC-1112 Dec. 11, 1943 Chemistry Monthly, C-II, Coryell.
Radiochemistry of the Fission Products. Zr-Cb chains; prepn. of Cb tracer and Zr tracer; beta energy of Sr^{90} and probable absence of gamma; evaluation of half-life of Sr^{90} ; Ir daughter of Ce; adsorption and scattering effects on beta spectra.
- CN-1113 Dec. 11, 1943 Chemistry Monthly, C-II, Coryell.
Direct Contributions to Process Decontamination & Analysis.
Decont. of Zr and Cb in presence of BiFO_4 ; BiFO_4 , MnO_2 and ceric phosphate scavengers; BiFO_4 extraction and decontamination including shot-gun scavenging.
- CN-1115 Dec. 13, 1943 Chemistry Monthly, C-I, Perlman.
Production and Extraction of Plutonium. Fe^{+2} as reducing agent, decont. in LaF_3 crossover; effect of Pb on BiFO_4 process; oxidation of Pu by Ce^{+4} and NaBiO_3 ; reduction by $\text{H}_2\text{C}_2\text{O}_4$; alkaline metathesis of LaF_3 ppts.
- CC-1204 Jan. 11, 1944 Chemistry Monthly, C-II, Coryell.
The Fission Products and Radiation Chemistry. 12.5d $\text{Ba}^{140} \rightarrow 40\text{h } \text{La}^{140}$; fission yield irreg; The isotope U^{236} ; tracer preparation; La-Y separation by K_2CO_3 ; fission products in Pd-Sb range; scattering in beta radiation and beta absorption curves; effect of radiation on masonite. $\text{Pb}(\text{NO}_3)_2$, etc.
- CN-1205 Jan. 11, 1944 Chemistry Monthly, C-II, Coryell.
Direct Contributions to Process Decontamination & Analysis.
Determination of Ce in BiFO_4 process solns; process thermodynamics; adsorption of Cb on MnO_2 ; scavenging with BiFO_4 .
- E-CC-1281 Feb. 15, 1944 Analytical Division Semi-Monthly.
- M-CN-1285 Feb. 15, 1944 Chemistry Division Semi-Monthly.

- M-CC-1293 Feb. 29, 1944 Analytical Division Semi-Monthly.
- M-CN-1296 Feb. 29, 1944 Chemistry Division Semi-Monthly.
- CN-1299 Feb 25, 1944 Chemistry, C-I, Perlman.
Production and Extraction of Plutonium. Tetravalent Uranium as a Reducing Agent. Kroner, Hill, Bohlmann, Miller. Reduction of Pu in BiPO_4 decontamination cycle and fluoride conc. cycle; Carrying of Pu by lower conc. of Bi^{+3} in absence of Fe; process runs using uranous reduction in decontamination cycle.
- CN-1301 Mar. 1, 1944 Chemistry, C-I, Perlman.
Use of Ferrous Iron as a Reductant for Plutonium in Fluoride Solutions. Koshland and Malm. Fe^{++} as a reducing agent in crossover cycle, and its effect on carrying of Pu; reduction of Pu using combination of H_2O_2 and Fe^{++} .
- CC-1302 Feb. 15, 1944 Chemistry, C-II, Coryell.
Method for Fission Product Analysis. Hume, Glendenin, Ballou. Progress report giving status of problem and bibliography.
- CC-1304 Feb. 14, 1944 Chemistry, C-II, Coryell.
The Isolation of Individual Fission Products. Hume, Glendenin, Ballou. Closing out report with bibliography of reports for detailed procedures. (Carrier-free tracers).
- CC-1306 Feb. 24, 1944 Chemistry, C-II, Coryell.
Progress Report on the Study of Short-Lived Activities Produced in Pile-Bombarded Water. Knight, Novey, Schover, Elliott. Work on identification of 8 second hard gamma activity, etc. in pile irradiated water.
- CN-1307 May 30, 1944 Chemistry, C-II, Coryell.
Final Report. The Effect of Radiation on the BiPO_4 Separation Process. McClinton, Cannon, Jenks, Day, Shapiro, Boyle. Details of preparation of synthetic W solution; efficiency of BiPO_4 process at W activity levels.
- CC-1308 Apr. 12, 1944 Chemistry, C-II, Coryell.
Activities Induced in Solid Residues from Columbia River Water. Elliott and Coryell.

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CN-1309 Apr. 17, 1944 Chemistry, C-II, Coryell.
The Distribution of FP's in Product Containing Fractions: Five Plant D-I-P Solutions, All of Plant Run #43, and all of a Liter Scale Lab Run. Davies and Associates.

CC-1310 May 3, 1944 Chemistry, C-II, Coryell.
The Effect of Radiation on Water and on Aqueous Solutions Part I. Shapiro, Boyle, Jenks. Initial rate of H_2O_2 formation; conc. of H_2O_2 at W; effect of O_2 conc. on the initial rate of formation of H_2O_2 .

CN-1311 June 6, 1944 Chemistry, C-II, Coryell.
Progress Report. The Distribution of Fission Products in Product-Containing Fractions of Plant Run #86. Hume, Martens, and associates.

CN-1312 May 15, 1945 Chemistry, C-II, Coryell.
Development of Methods for the Determination of Fission Product Activities in Plant Process Solutions. Hume, Glendenin, Ballou, and associates. Final report on fission product analytical methods.

M-CC-1402 Mar. 15, 1944 Analytical Division Semi-Monthly.

M-CN-1404 Mar. 15, 1944 Chemistry Division Semi-Monthly.

CP-1408 Nov. 11, 1944 Chemistry, C-I, English.
Instrument Division. Procedures for Manufacture of Counter Tubes. Hunt, Jarrett, Bennet, Butenhoff, Carr, Haines.

CN-1412 Apr. 26, 1944 Chemistry, C-I, Perlman.
Final Report. Oxalate as a Reducing Agent. Bohlmann, Dam, Halpern, Hill. Reduction by oxalic acid in cross-over cycle and in LaF_3 conc. cycles.

M-CC-1413 Mar. 31, 1944 Analytical Division Semi-Monthly.

M-CN-1414 Mar. 31, 1944 Chemistry Division Semi-Monthly.

CN-1421 Mar. 4, 1944 Chemistry, C-I, Perlman.
Final Report. Use of Bismuth Phosphate for Concentrating Plutonium from Lanthanum Solutions. Fries.

CN-1422 Apr. 10, 1944 Chemistry, C-I, Perlman.
Progress Report. Application of Decontamination Studies to the Design of Improved Steps in the Complete $BiPO_4$ Process.

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M-CN-1424	Apr. 15, 1944	Chemistry Division Semi-Monthly.
M-CC-1426	Apr. 15, 1944	Analytical Division Semi-Monthly.
CC-1432	Apr. 21, 1944	Analytical Division, Smith. <u>Progress Report. Determination of Free Nitric Acid in UNH Solutions.</u>
M-CN-1434	Apr. 30, 1944	Chemistry Division Semi-Monthly.
M-CC-1438	Apr. 30, 1944	Analytical Division Semi-Monthly.
CN-1441	Apr. 3, 1944	Chemistry, C-I, Perlman. <u>Final Report. Decontamination in the Crossover Cycle of the BiF₅ Process at Clinton.</u> Miller and associates. Improved decontamination by use of LaF ₃ by-product ppt. in crossover cycle.
M-CC-1613	May 15, 1944	Analytical Division Semi-Monthly. Includes determination of Ce(III) in presence of Ce(IV).
M-CN-1614	May 15, 1944	Chemistry Division Semi-Monthly.
CN-1618	June 1, 1944	Chemistry, C-I, Perlman. <u>Progress Report. Hanford Isolation Studies.</u> Fries and Barrick. Flowsheet for K ₂ CO ₃ metathesis.
M-CN-1622	May 31, 1944	Analytical Division Semi-Monthly. Includes adsorption of fission products by IR-1 resin, and distribution of activity and decontamination in process solutions.
M-CN-1624	May 31, 1944	Chemistry Division Semi-Monthly.
CN-1630	June 3, 1944	Chemistry, C-I, Perlman. <u>Final Report. Purification of Plutonium from Lanthanum by Peroxide Precipitation.</u> Werner and Moore. Extent of La contamination of Pu from isolation; effect of SO ₄ ⁼ ion on process.
CC-1631	June 10, 1944	Chemistry, C-II, Coryell. <u>Contributions to the Water Problem.</u> Novey, Knight, Schover, and Elliott. Identification of 8s activity as N ¹⁶ ; recoil range of Al ²⁸ from Al ²⁷ (n, γ) reaction.
M-CN-1634	June 15, 1944	Chemistry Division Semi-Monthly.
M-CC-1635	June 15, 1944	Analytical Division Semi-Monthly.

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CN-1639 June 13, 1944 Chemistry, C-I, Perlman.
Progress Report. Detection of Polonium in Plutonium Solutions. Miller and Halpern.

CN-1641 July 7, 1944 Chemistry, C-II, Coryell.
Surface Reactions of Zirconium, Barium, and Tellurium Ions with Lanthanum Fluoride and Manganese Dioxide. Gest and Burgess.

CN-1643 June 22, 1944 Chemistry, C-I, Perlman.
Orientation Runs of the Hanford Process. Miller, Halpern, Hunt, Kay, Rose.

CF-1645 July 4, 1944 Chemistry, C-I, Perlman.
Progress Report. Development and Construction of Alpha-Counting Equipment. Firminhac, Borkowski, Dandl, East.

CN-1646 July 4, 1944 Chemistry, C-I, Perlman.
K₂Cr₂O₇ as an Oxidant in the BiF₃ Process. Final Report. Halpern, Kroner, Hunt.

CN-1647 July 4, 1944 Chemistry, C-I, Perlman.
Final Report. Concentration Processes Involving the Use of Hydrochloric Acid. Dam and Fries.

CN-1648 June 1944 Health, Parker.
Measurement of Product Activity in Air. Parker, Bloss, Rendell.

M-CC-1652 June 30, 1944 Analytical Division Semi-Monthly.

M-CN-1654 June 30, 1944 Chemistry Division Semi-Monthly.

CN-1656 July 12, 1944 Analytical, Hoff.
Progress Report. Determination of Iron in Product Solns. Allen and Parlour.

CN-1838 July 10, 1944 Chemistry, C-I, Perlman.
Final Report. Alternate Methods of Hydroxide Metathesis of LaF₃ in the Concentration Cycle. Cooper, Dam, Fries, Ga rder, Koshland, Kroner, Miller.

CN-1839 July 10, 1944 Chemistry, C-II, Coryell and C-III, Boyd.
Fission Product Distribution in an Adsorption Extraction Decontamination Cycle with an Ion Exchanger. Swartout, Hume, and associates.

CN-1843 Aug. 10, 1944 Chemistry, C-III, Boyd.
Scavenging Studies with Particular Ref. to By-Product Fpns. for the Removal of Rare Earth Activities. Davies, Swartout, and associates.

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K-CN-1844 July 15, 1944 Chemistry Division Semi-Monthly.

M-CC-1846 July 15, 1944 Analytical Division Semi-Monthly.

CN-1848 July 15, 1944 Chemistry, C-I, Perlman.
Final Report. Application of Decontamination Studies to the Design of Improved Steps in the Complete BiFO₄ Process. Miller, Germany, Kroner, Meyers, Scott. LaF₃, BaSO₄-LaF₃, CeF₃, BaSO₄-CeF₃, BaSO₄, BaZrF₆, Ce(IV) and Zr(IV) scavengers; solubilizing of Zr and Cb by HF.

CN-1850 July 6, 1944 Analytical Division, Hoff.
Abstracts of Analytical Methods Appearing in the Classified Reports. Compiled by Andrews.

K-CN-1854 July 31, 1944 Chemistry Division Semi-Monthly.

M-CC-1856 July 31, 1944 Analytical Division Semi-Monthly.

CN-1859 Apr. 19, 1945 Chemistry, C-III, Boyd.
Studies in Ion Exchange Adsorption; Dynamics of Pu(IV); Adsorption from Aqueous Uranyl Nitrate Solutions. Adamson and associates.

CN-1861 Aug. 5, 1944 Chemistry, C-I, Perlman.
Progress Report. Decontamination in the Hanford Process Using Cerium-Zirconium-Phosphate Scavengers. Bohlmann and associates. Process service flowsheet, variations from tentative ~~is~~ flowsheet; gamma and beta decontamination; product yields, and losses; correction for Pu gamma emission.

CN-1863 July 30, 1944 Chemistry, C-II, Coryell and C-III, Boyd.
Final Report. The Solubility of BiFO₄ in HNO₃. Leader, Neville, Lapp, Evans, Davies, and Rubinson.

CL-1868 Aug. 9, 1945 Analytical Division, Coleman.
Final Report Product and Fission Product Training Program. Section I, Methods. Compiled by Wilson.

CL-1868 Aug. 5, 1945 Analytical Division, Coleman.
Final Report on Product and Fission Product Training Program, Section II, Instruments. Compiled by Wilson.

CN-1873 Jan. 1, 1945 Chemistry, C-III, Boyd.
Final Report. Studies in Ion Exchange Adsorption Equilibria with Pu(IV), Fission, and Other Cations. Schubert and associates. Introduction and general theory, prepn.

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and properties of adsorbants; macroscopic and radiochemical exchange systems; chemical stability of IR-1; activity coefficients of electrolytes in aq. solns; adsorption of radioelements by other base-exchangers; etc.

- CC-1877 Aug. 7, 1944 Analytical Division, Coleman.
Progress Report. Shielded Apparatus for Process Control Assays. Coleman and Day.
- CN-S-1878 Aug. 1, 1945 Chemistry, C-III, Boyd.
Progress Report. Basic Fission Product Solution Chemistry. Hydrolysis and Complex Ion Formation in Solutions of Zirconium, Columbium, and Uranium. Based on results of a literature search.
- CN-1880 Aug, 1944 Analytical Division, Fenninger.
Sampling and Control Analytical Procedures: Bismuth phosphate Extraction-Decontamination Plant. Fenninger.
- CN-1831 Aug. 11, 1944 Chemistry, C-I, Perlman.
Concentration of Plutonium by Precipitation of the Iodate from $\text{La}(\text{NO}_3)_3$ Solutions. Fries. Solubility of $\text{La}(\text{IO}_3)_3$ and $\text{Pu}(\text{IO}_3)_4$; precipitation of $\text{Pu}(\text{IO}_3)_4$ following metathesis of LaF_3 ; studies on the solubility of the iodates of Pu(III) and Pu(IV).
- M-CN-1384 Aug. 15, 1944 Chemistry Division Semi-Monthly.
- M-CN-1886 Aug. 15, 1944 Analytical Division Semi-Monthly.
- CN-1890 Aug. 16, 1944 Chemistry Division.
Some Chemical Problems in the Post-War Production of Pu. Brown.
- CC-1895 Aug. 15, 1944 Analytical Division, Fenninger.
Report #1 on Statistical Study of 200 Area Control Program - Clinton. Jones.
- CN-2007 Aug. 18, 1944 Chemistry, C-I, Perlman.
Final Report: Uranous Oxalate Method for Concentration of Plutonium. Dam.
- CN-2008 Aug. 15, 1944 Analytical Division, Hoff.
Final Report. Ionic Methods of Analysis. Parlour.
- CC-2009 Aug. 29, 1944 Chemistry, C-II, Coryell.
Progress Report. Preparation of Carrier-Free Zr-Cb Tracer. Marinsky, Ballou, Hume. Chloroform extraction of Zr and Cb cupferrides.

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CN-2011 Aug. 23, 1944 Analytical Division, Hoff.
Final Report. Separation of Product from Solutions which are to be used for Fission-Product Analysis. Waters, Stanley, Martens.

CC-2014 Sep. 4, 1944 Chemistry, C-II, Coryell.
An Improved Preparation of Carrier-Free Columbian Tracer with Manganese Dioxide for Remote Control Operations. Siegel, Bigler, and Hume.

M-CN-2016 Aug. 31, 1944 Chemistry Division Semi-Monthly.

M-CN-2018 Aug. 31, 1944 Analytical Division Semi-Monthly.

CC-2022 Sept. 1, 1944 Analytical Division, Fenninger.
Final Report. Statistical Study of 200 Area Control Program. Jones.

CI-2026 Sep. 8, 1944 Chemistry, C-I, English.
Progress Report. Low Geometry Alpha Particle Ionization Chambers. Borkowski, East, Flatau.

CN-2027 Sep. 14, 1944 Chemistry, C-III, Boyd.
Status Report. Nomographs for the Solubility of BiFO₄ in HNO₃, HNO₃-H₃PO₄, and HNO₃-Bi³⁺ Solutions. Swartout, Leader.

M-CN-2032 Sep. 15, 1944 Analytical Division Semi-Monthly.

M-CN-2034 Sep. 15, 1944 Chemistry Division Semi-Monthly.

CN-2037 June 1, 1945 Chemistry, C-III, Boyd.
Studies of the Physical Chemistry of Precipitable Forms of BiFO₄. Brosi and associates.

CN-2040 Sep. 23, 1944 Chemistry, C-I, Perlman.
Development of Radiochemical Analytical Procedures for Plutonium - (1) Synthetic Solutions. Clifford, Koshland, and associates. Sampling; completeness of carrying of Pu by LaF₃; analytical techniques; counting and corrections for self-absorption.

CN-2041 Jan. 8, 1945 Chemistry, C-I, English.
Progress Report. Development of Radiochemical Analytical Procedures for Plutonium - (2) Recommendations for a Standard Procedure and Tests in Uranyl Solutions. Koshland and associates.

~~SECRET~~

CN-2044 Oct. 3, 1945 Chemistry, C-I, Perlman.
Progress Report. The Lower-Product and Capture-Fission Ratios in X-Metal. Perlman and associates.

CN-2054 Sep. 23, 1944 Chemistry, C-I, Perlman.
Progress Report. Decontamination in the Bismuth Phosphate Process under Clinton Conditions. Pohlmann, Blomeke, Hill and Miller. Effect of process conditions on overall decontamination in BiPO₄ process; effect of scavengers and presence of HF in product precipitation; product losses etc.

CN-2056 Sep. 12, 1944 Analytical Division, Fenninger.
Final Report. Standardization of Assay Method. Klein & associates.

CC-2176 Nov. 9, 1944 Chemistry, C-II, Coryell.
Final Report. Direct Calorimetric Study of Fission Product Decay in Active Slugs. Day and Cannon.

M-CN-2177 Oct. 31, 1944 Chemistry Division Semi-Monthly.

M-CN-2178 Oct. 31, 1944 Analytical Division Semi-Monthly.

M-CN-2181 Sep. 30, 1944 Analytical Division Semi-Monthly.

M-CN-2184 Sep. 30, 1944 Chemistry Division Semi-Monthly.

CC-2187 Nov. 2, 1944 Chemistry, C-II, Coryell.
Progress Report. An Investigation of the Absorption Cross Section of Xe¹³⁵ for Fast Neutrons. Elliott, Knight, Novey and Shapiro.

CN-2190 Nov. 10, 1944 Analytical Division, Fenninger.
Colloid Coating of Platinum Plate in Product Assay by Lanthanum Fluoride Method. Bojer, Kulp, Miller, Gifford, Quinn.

M-CN-2191 Oct. 15, 1944 Analytical Division Semi-Monthly.

M-CN-2194 Oct. 15, 1944 Chemistry Division Semi-Monthly.

CN-2195 Nov. 24, 1944 Chemistry, C-III, Boyd.
Solubility of BiPO₄ and Uranyl Phosphate in UNH Solutions. Leader and Richter.

CN-2197 Dec. 2, 1944 Chemistry, C-III, Boyd.
Progress Report. Colloidal Chemical Factors in the Clinton and Hanford Separation Processes. Schubert, Richter,

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- ~~CONFIDENTIAL~~
- Conn, Brosi, Leslie. Colloidal behavior of Pu and fission products in process solutions by dialysis studies; ion exchange adsorption studies; centrifugation experiments; diffusion constant measurements.
- CN-2200 Nov. 1944 Analytical Division, Fenninger.
The Measurement of Gamma Activity by means of the Metallurgical Laboratory High Pressure Ionization Chambers.
Feder.
- CN-2204 Dec. 19, 1944 Analytical Division, Fenninger.
Final Report. Development of Assay Methods. Herre, Kierman, Klein and associates.
- CN-2210 June 30, 1945 Chemistry, C-I, English.
Concentration Methods Related to the Peroxide Isolation Process. Hanford Isolation Studies. Bailey, Barrick, Farabee, Gevantman, Manion and Spector.
- CN-2211 June 30, 1945 Chemistry, C-I, English.
Studies of Steps Related to the Peroxide Isolation Process. Hanford Isolation Studies. Barrick, Lindner, Manion, Spector.
- CN-2212 June 30, 1945 Chemistry, C-I, English.
The Potassium Carbonate Dissolution Type Metathesis of Lanthanum Fluoride. Bailey, Barrick, Farabee, Halbach, Kennedy, and Manion.
- CN-2213 June 30, 1945 Chemistry, C-I, English.
Investigation of the Chemistry of Pu; Studies of the Peroxide of Pu and Th. Kroner and Spector.
- CN-2214 May 1, 1945 Chemistry, C-I, English.
Some Properties of the Polymeric Form of Plutonium (IV). Investigations of the Chemistry of Plutonium. Werner. Fpt. reactions of polymeric Pu(IV); dialysis of solns. of polymeric Pu(IV); high speed centrifugation of polymeric Pu(IV).
- CN-2215 Aug. 14, 1945 Chemistry, C-I, English.
Investigations of the Chemistry of Plutonium. Studies on Reactions of Pu in UNH Solutions. Dam, Germany, Halpern. Investigation of agents for reduction of Pu(IV) in metal solutions immediately after dissolution.
- CN-2216 May 2, 1945 Chemistry, C-I, English.
Preliminary Studies of Plutonium in Alkaline Solutions. Progress Report. Moore, Dam. Absorption spectra, complexing, and oxidation states of Pu in alkaline solns.
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- CN-2217 May 1, 1945 Chemistry, C-I, English.
Progress Report. Prevention of Losses in LaF₃ By-product Precipitations. Kroner.
- CC-2218 Jan. 20, 1945 Chemistry, C-II, Coryell.
The Interchange of Radioactive Iodine with Carrier; A Procedure for the Quantitative Separation of Radioactive Iodine from Fission Material. Glendenin, Metcalf, Novey.
- CC-2219 Feb. 1, 1945 Chemistry, C-II, Coryell.
Fission Yield and Decay Characteristics of the Chain $6.7h I^{137} \rightarrow 9.2h Xe^{137}$. Glendenin and Metcalf.
- CC-2220 Dec. 27, 1944 Chemistry, C-II, Elliott.
The Reaction of Lead and Barium Sulfates with Carbon Tetrachloride. Elliott.
- CN-2223 Jan. 15, 1945 Chemistry, C-III, Boyd.
The Aging of Bismuth Phosphate Precipitates. Stanley, Conn, and Adamson. Rate of uptake of radio phosphorus and rare earths by BiPO₄ pts. under varying conditions; theory and derivation of equations for recrystallization and diffusion, etc.
- CN-2224 Jan. 15, 1945 Chemistry, C-III, Boyd.
The Co-Precipitation of Plutonium (IV) with Bismuth phosphate. Adamson.
- CN-2226 Jan. 15, 1945 Chemistry, C-III, Boyd.
Investigation of the Use of Externally Prepared Bismuth Phosphate for the Extraction of Plutonium from Uranyl Nitrate Solutions. Edwards.
- CN-2557 Jan. 15, 1945 Chemistry, C-III, Boyd.
Solubility of BiO₂ and Uranyl phosphate in UNH Solns. Kettle and Richter.
- CN-2558 Jan. 15, 1945 Chemistry, C-III, Boyd.
Final Report. The Coprecipitation of the Trivalent Rare Earths with Bismuth phosphate, Part IV. Meyers, Williams.
- CN-2559 Jan. 1, 1945 Chemistry, C-III, Boyd.
Final report. Studies on the Carrying of Zirconium (IV) by Bismut. Phosphate Precipitates, Part V. Gest, Burgess, Neville.

- CN-2560 Jan. 15, 1945 Chemistry, C-III, Boyd.
The Solubility of Zirconium Phosphate in Nitric, Phosphoric and Hydrofluoric Acid Solutions. Burgus.
- CN-2561 Jan. 15, 1945 Chemistry, C-III, Boyd.
Physical Properties of the X Plant Product, By-product and Scavenger Precipitates. Edwards.
- CN-2563 Feb. 1, 1945 Chemistry, C-III, Boyd, and C-IV, Cohn.
Final Report. The Extraction, Concentration, and Decontamination of Ba¹⁴⁰ from Uranyl Nitrate Solutions by an Adsorption Process. Schubert, Tompkins, and associates.
- CN-2564 Feb. 1, 1945 Chemistry, C-III, Boyd.
Final Report. Studies on the Carrying of Columbium(V) by Bismuth phosphate Precipitates. Part VI. Brosi and associates.
- CN-2566 Jan. 1, 1945 Analytical Division, Struthers.
A Review of Analytical Data with Reference to Product Assay.
- CC-2570 Feb. 1, 1945 Chemistry, C-II, Coryell.
The Development of Standard Procedures for the Radiochemical Assay of Radium in the 706-C Process. Nelson, Boldridge, Hume.
- CN-2574 Mar. 7, 1945 Chemistry, C-I, English.
Studies on the Preparation of Beta BiO₃ and its Carrying and Decontamination Properties. Dissolution of Bismuth Phosphate Precipitates. Final Report. McBride.
- CN-2575 Apr. 28, 1945 Chemistry, C-III, Boyd.
An Ion-Exchange Method for the Determination of the Dissociation Constants of Complex Ions. Richter & Schubert.
- CN-2578 Mar. 1, 1945 Chemistry, C-III, Boyd.
Final Report. Part IX. The Factorial Scheme of Experimentation as Applied to the Bismuth phosphate Precipitation Process. Myers. Effect of strike time, kind of strike, phosphoric acid and bismuth conc.; formation of beta BiO₃, etc.
- CN-2579 Feb. 14, 1945 Chemistry, C-III, Boyd.
Notes on the Thermodynamics of the alpha-beta Transition in Bismuth phosphate. Schubert.

CN-2580 Feb. 1, 1945 Chemistry, C-II, Coryell.
Final Report. Tracer Supply. Hume.

CN-2581 Feb. 1, 1945 Chemistry, C-II, Coryell.
Final Report. Fission Product Analysis Training Program.
Hume.

CP-2582 Feb. 20, 1945 Chemistry, C-VI, Elliott.
A Simple Method of Evaluating Coincidence Losses in
Geiger-Müller Counting Circuits. Metcalf & Hennessee.

CN-2583 Feb. 24, 1945 Chemistry, C-III, Boyd.
An Alternate Procedure for the Separation of Lead from
Barium Based on Ion Exchange Adsorption. The Lead-Ba
Lead-La Equilibrium in Amberlite IR-1. Schubert.

CH-2584 Feb. 1, 1945 Chemistry, C-III, Boyd.
Radiocolloidal Behavior of Pa²³³ and Methods for its
Separation. Schubert.

CC-2585 June 27, 1945 Chemistry, C-III, Boyd.
Radiocolloids. Actualite's et Industrielles No. 185
(1934). Haissinsky, Translated by Adamson & Swartout.

CN-2586 Feb. 27, 1945. Chemistry Division Monthly, 2/15/45. W. C. Johnson.

CA-2593 Mar. 8, 1945 Chemistry, C-I, English.
The Behavior of Plutonium Fission Products in the Bi₂O₃
Process. Leininger and Rose.

CN-2595 July 30, 1945 Chemistry, C-III, Boyd.
The Influence of Re(III) on the Coprecipitation of the
Trivalent Rare Earths by Bi₂O₃ Precipitates. Kettle,
Leader, Williams, and Stanley.

CN-2596 Mar. 15, 1945 Chemistry Division Monthly, 3/15/45. W.C. Johnson.

CC-2604 July 28, 1945 Chemistry, C-III, Boyd.
Separation of Uranium(VI) from Thorium Using Organic
Complex-Forming Reagents and Solvent Extraction.
Neville.

CC-2605 Feb. 28, 1945 Chemistry, C-VI, Elliott.
Some Activities from Tritium Bombardment in Neutron Ir-
radiated Lithium Salts. Knight, Novey, Cannon, Turkevich.

CN-2802 Apr 28, 1945 Chemistry, C-I, English.
Low Temperature Plutonium Peroxide Precipitation Studies.
Barrick, Kennedy, Manion.

- CN-2807 Apr. 23, 1945 Chemistry, C-I, English.
Analysis of Pu(IV) Polymer for Chloride Ions. Rose.
- CN-2809 Apr. 15, 1945 Chemistry Division Monthly, 4/15/45, W.C. Johnson.
- CN-2814 May 22, 1945 Chemistry, C-III, Boyd.
Development of Szilard-Chalmers Methods for Preparing Carrier-Free Tracers: Studies on Sb¹²⁴. Williams and associates.
- CN-2315 June 30, 1945 Chemistry, C-II, Coryell, and C-V, Hume.
A Manual of the Radiochemical Determination of Fission Product Activities. Hume, Ballou, Glendenin. Methods and techniques of radiochemical analysis for the fission product activities; procedures for Ba, Zr, Sr, Cb, Ru, Te, Cs, I, total rare earths, Ce, La group, and Y group in process solutions.
- CN-2819 May 15, 1945 Chemistry Division Monthly, 5/15/45, W.C. Johnson.
- CC-2821 May 31, 1945 Chemistry, C-IV, Cohn.
Note on the Preparation of Fe⁵⁹ Tracer by the Szilard-Chalmers Reaction of Ferrocyanide. Tompkins & Cohn.
- CN-2823 June 8, 1945 Chemistry, C-III, Boyd.
The Coprecipitation of the Trivalent Rare Earths with Bismuth Phosphate, Part II. Meyers.
- CF-2825 June 4, 1945 Chemistry, C-VI, Elliott.
A Correlation of Methods for the Determination of Absolute Neutron Flux. Novey. Comparison of values of flux determined by gold foil activation and fission in uranium foils.
- CC-2826 June 1, 1945 Chemistry, C-V, Hume.
The Radiochemical Determination of Total Antimony Tracer Activity and Differential Antimony(III) and Antimony(V) Activities. Boldridge and Hume.
- CC-2827 June 1, 1945 Chemistry, C-IV, Cohn.
The Separation and Purification of Carrier-Free Fission Products, Including Individual Rare Earths, by Specific Elution from Amberlite Resin. Tompkins, Parker & associates.
- CC-2828 June 26, 1945 Chemistry, C-II, Coryell.
The Preparation of Carrier-Free Ruthenium Tracer and Some Observations on the Chemistry of Ruthenium. Hume.

CC-2829 June 1, 1945 Chemistry, C-II, Coryell.
The Separation and Identification of Nd and Element 61
Fission Activities by Specific Elution from Amberlite
Resin. Marinsky and Glendenin.

CC-2833 June 16, 1945 Chemistry, C-III, Boyd.
Development of Szilard-Chalmers Methods for Preparing
Carrier-Free Tracers: Studies of U²³⁷. Stanley,
Adamson, and Leslie.

CC-2835 June 15, 1945 Chemistry, C-II, Coryell.
Zn and Ga Activities in Uranium Fission. Siegel and
Glendenin.

CC-2836 June 30, 1945 Chemistry, C-II, Coryell.
Special Procedures for the Isolation of Zn and Ga
Fission Activities. Siegel and Glendenin.

CN-2839 June 15, 1945 Chemistry Division Monthly, 6/15/45, W.C. Johnson.

CC-2845 June 30, 1945 Chemistry, C-V, Hume.
A Study of the Separation of Cerium by Iodate Precipitation and the Improved Radiochemical Determination of
Cerium and Rare Earth Activities. Boldridge & Hume.

CC-3100 June 30, 1945 Chemistry, C-V, Hume.
The Determination of Traces of Iron, Lead, and Chromium
In Active Barium Preparation by Remote Control Polar-
ography. Nelson, Boldridge, and Hume.

CC-3101 Sep. 20, 1945 Chemistry, C-III, Boyd.
Studies on Coprecipitation Mechanisms: The Isomorphous
Carrying of Plutonium(III) by Bismuth Phosphate. Conn.

CN-3103 June 30, 1945 Chemistry, C-I, English.
Product Carrying in the BiPO₄ Process Under Hanford Con-
ditions. Factors Influencing the Carrying of Plutonium
by BiO₃ from Uranyl Nitrate Solutions. Koshland and
associates.

CN-3293 June 30, 1945 Chemistry, C-I, English.
Study of Decontamination in the Hanford Process and Design
of Improved Steps. Scavenging from Plutonium(IV) Solns.
Rose.

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MonN-2 July 15, 1945 Chemistry Division Monthly, 7/15/45, W.C.Johnson.

MonP-5 Aug. 1, 1945 Chemistry, C-VI, Elliott.
Removal of Noble Gases from Solutions with Carrier Gases. Livingston, Shapiro, Elliott.

MonN-6 Aug. 15, 1945 Chemistry Division Monthly, 8/15/45, W.C.Johnson.

MonC-10 Sep. 1, 1945 Chemistry, C-IV, Cohn.
Preparation of Carrier-Free $10.2d$ Cs¹³¹. Finkle & Cohn.

MonC-11 Sep. 1, 1945 Chemistry, C-IV, Cohn.
Preparation of Carrier-Free $13.8d$ Fr¹⁴³. Finkle & Cohn.

MonC-12 Sep. 11, 1945 Chemistry, C-IV, Cohn.
The Separation of Calcium and Strontium by Fuming Nitric Acid. Khym and Tompkins.

MonN-13 Sep. 1, 1945 Chemistry, C-V, Hume.
Development of a Method for the Determination of Np Activity in Process Solutions. Hudgens and associates.

MonN-15 Sep. 15, 1945 Chemistry Division Monthly, 9/15/45, W.C.Johnson.

MonN-27 Oct. 24, 1945 Chemistry, C-III, Boyd.
The Chemistry of Gas and Peroxide Formation Induced by Radiation in Water Solutions. Surface Properties of Palladium Catalysts. Brosi.

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