"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

2 **Extraction of methyl alcohol from wood-generator gas.** N. V. Chakov. *Leukhim. Prom.* **1939**, No. 12, 9-17; *Khim. Referat. Zhur.* **1940**, No. 4, 102-3; cf. *C. A.* **34**, 2164°.—MeOH is recovered from wood generator gas in 2 stages: by direct cooling of the gas and a subsequent cooling in a multistage scrubber. Two variations of extn. of MeOH by direct cooling of the gas gave the following resp.: temp. of the aq.-alc. soln. flowing out of the scrubber 42 and 55°, concn. of aq. soln. of MeOH 0.7
3 and 0.38% by wt., degree of extn. of MeOH from the gas 53.7 and 29.5%, MeOH remaining in the gas 1.94 and 2.97 g./cu. m. Other valuable products are extd. simultaneously with MeOH. The true content of valuable products in the soln. is 1.2-1.5%. W. R. Henn

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2

Equilibrium between liquid and vapor phases in the aqueous solutions of methyl alcohol in low concentration. N. V. Chalov and M. A. Sholina. *J. Applied Chem.* (U. S. S. R.) 12, 1170-1(1939).—The liquid-vapor phase equil. of 0.01-2.00% (by wt.) aq. soln. of MeOH was investigated. The concn. of MeOH was varied from 0.0097% in liquid and 0.040% in vapor phases to 1.00% and 7.16%, resp. Data are tabulated. A. A. P.

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Extracting acetic acid from wood producer gas. N. V. Chalov and N. S. Postnikova. Russ. 57,863, Sept. 30, 1940. The gas, cooled to 65-75°, is treated with water at 60° in a multistage scrubber.

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Continuous process for trihydroxyglutaric acid. N. Y. Chalov. U.S.S.R. 66,812, Feb. 28, 1946. A mixt. of xylose and $HNO_3$ is passed consecutively through, e.g., 4 reactors at a definite rate and temp. M. Hosch

COMMON ELEMENTS

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Ca

10

Xylonic acid. N. V. Chakov. U.S.S.R. 63,814, Feb. 28, 1946. Through an aq. soln. of xylose contg. $Ca(OH)_2$ at 20-60°, and a pH 8-10, is passed air. Xylonic acid is set free from the ppted. Ca xylonate by the usual method.
M. Hosch

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Ca

10

Trihydroxyglutaric acid. N. V. Chalov. U.S.S.R. 65,815, Feb. 28, 1946. A neutral Ca xylonate is treated first at 60° and then at 100° with a mixt. of $H_2SO_4$ and a $HNO_3$. The $H_2SO_4$ is added in a quantity needed to liberate the xylonic acid from its salt while $HNO_3$ is added in 1.5 times the calcd. amt. M. Hasch

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PROCESSES AND PROPERTIES INDEX

**Equilibrium distribution of methyl alcohol between the vapor-air mixture and water.** N. V. Chaiev and I. P. Tsvetaeva. *J. Applied Chem.* (U.S.S.R.) 19, 945-52 (1946) (in Russian).—Air was bubbled through 5 consecutive 1.0-1.7 and 0.4-0.5% aq. solns. of MeOH, at 2-4 l./min., and brought into equil., consecutively, with pure water and with a soln. of 2-3 times higher concn. The equil. const. $K$ = mol. % MeOH in air/mol. % MeOH in water, under 760 mm. Hg, at 5, 10, 20, 30, 40, 50° was found to be 0.058, 0.110, 0.219, 0.328, 0.680, 1.02; in another series, 0.077, 0.098, 0.229, 0.361, 0.640, 0.985. The exptl. curve runs parallel to the curve calcd. by $K = [(x - 0.0663)/(1.481\ x - 0.012) + 1.74]p/P$, where $x$ = mol. % of MeOH in water, $p$ = satd. vapor pressure of MeOH at the given temp., $P$ = total pressure. The theoretical values, for any given $K$, are higher by an amt. equiv. to the difference caused by 5-6°. The empirical formula best fitting the exptl. data is $\log K = 1.7505 - 0.0298t - 3$. If the MeOH content in the air-vapor mixt. is expressed in g./cu. m. ($y$), in water in wt. % ($x$), the practical equil. const. $K' = 0.56, 0.83, 1.89, 2.93, 5.63, 9.25$, at 5, 10, 20, 30, 40, 50°, resp., and the empirical formula is $y = 0.208\ x \exp.\ (0.34t^{0.014})$. N. Thon

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2

**Equilibrium between the liquid and the vapor phase in the system water-phenol at low phenol concentrations.** N. V. Chalov. *J. Applied Chem.* (U.S.S.R.) 10, 1371-2 (1937)(in Russian).—With the PhOH content in water rising from 0.00079 to 6.28 wt. %, its content in the vapor phase rises from 0.0015 g. to 7.47%. The ratio of the amt. of PhOH in vapor to that in the liquid is const. = 2.2.-2.6 up to about 0.5% PhOH in liquid, then falls (to 1.9, 1.66, 1.36, 1.19 for PhOH in liquid 0.91, 2.23, 4.60, 6.28, resp.). The data permit exact calcns. for dephenolizing waste water by steam blast. N. Thon

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CA

7

**Determination of ethyl alcohol in dilute aqueous solutions.** N. V. Chalov. U.S.S.R. 69,874, Dec. 31, 1947. The method is based on the conversion of EtOH into $EtNO_2$, hydrolyzing the latter and quantitatively detg. $HNO_2$. To remove admixed N oxides, gaseous Et nitrite is washed with an alk. permanganate soln. The accuracy of this method is ±3%. The presence of phenols, org. acids, aldehydes, ketones, and other org. substances does not interfere. M. Hosch

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733. PURIFICATION OF PRODUCER GAS GENERATED FROM WOOD IN A SHEET TYPE ELECTROFILTER. Chalov, N. V. and Lyamin, V. A. (Vestnik Inzhenerov i Tekh., 1947, No. 1, 34-9; Chem. Abstr., 1947, 41, 7077). The electrofilter removed 95% of the total tar in the gas and 99% of the tar present in the form of fog. This requires that the gas stay 10-14 sec. in the elec. field. To prevent contamination of the tar with $H_2O$, the gas entering the filter should be 8-10° above the dew point. Under such conditions the tar contained 20-5% moisture and the losses of AcOH did not exceed 25%. C. A.

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CA

21

The wood-chemical industry for utilization of the by-products of the gasification of wood. N. V. Chalov. *Lesnaya Prom.* 7, No. 9, 17-19(1947).—The by-products from wood gasification in metallurgical plants and glass plants are processed to recover AcOH, alc. products, tar, etc.

Marshall Sittig

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B

2294. COMPOSITION OF CONDENSABLE PART OF WOOD GAS AFTER EXTRACTION OF RESIN AND ACETIC ACID. Chalov, N. V. (J. Appl. Chem. U.S.S.R., 1947, 20, 105-9; Chem. Abstr., 1947, 41, 7709). Gasification of wood (22% birch, 78% conifers, moisture 37.2), 72 min., yielded 1.70 cu. m. dry gas per kg. of dry wood; after removal of resins in electrofilters at 76-77° and extn of AcOH in sprinkler scrubbers (gas entering the scrubber at 74-76°, leaving at 69-71°), the gas contained (in g./cu.m.): MeOH 5.24, HCOH 1.65, $Me_2CO$ 1.83, AcOH 0.72, $C_5H_{11}OH$ 2.41, phenols 2.28, AcOH 1.96, water-sol. resins 0.90, insol. resins 3.02; total 34.01 kg. per ton dry wood. Reclamation of these chemicals is advocated.

C.A.

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CHALOV, N. V.

Chalov, N. V. "The assistance of the BNIIGS to the industry in the battle for the utilization of planned capacities", Gidroliz. prom-st' SSSR, 1948, No. 6, p. 5-6.

So: U-3261, 10 April 53, (Letopis 'Zhurnal 'nykh Statey, No. 12, 1949).

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CHALOV, N. V. PA 49/49T25

USSR/Chemistry-Glutaric Acid Dec 48
Chemistry-Oxalic Acid

"Determination of Trioxyglutaric, Oxalic and Nitric Acid When They are Present Together," N. V. Chalov, A. I. Kurzhevnikova, All-Union Inst of Sulfite-Alcohol and Hydrolysis Ind, 1¼ pp

"Zavod Lab" Vol XIV, No 12

Describes a method for quantitative determination of nitric, oxalic and trioxyglutaric acids in the mixture obtained after oxidizing xylose with nitric acid. Accuracy is 2-3% for oxalic and 2% for trioxyglutaric.

49/49T25

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**Symmetrization of organic mercury salts which contain an amino group in the ring.** V. P. Chalov. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 18, 608-9(1948).—When p-$NH_2C_6H_4HgOAc$ (I) is converted to p-$NH_2C_6H_4HgS_2O_3Na$ (II) and boiled with $H_2O$, it is slowly converted to $(p\text{-}NH_2C_6H_4)_2Hg$ (III), but the yield is poor. If 2 g. II is heated to 60° with 8 g. $Na_2S_2O_3$ in 7 ml. $H_2O$, it rapidly forms 84% III. Heating I directly with $Na_2S_2O_3$ soln. gives 73% III. H. M. Leicester

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**Preparation of trihydroxyglutaric acid by oxidation of xylose by nitric acid.** N. V. Chalov. *Zhur. Prikład. Khim.* (J. Applied Chem.) 21, 486-95(1948).—Oxidation of xylose by $HNO_3$ (d. 1.2) at 60° gives low yields of *trihydroxyglutaric acid* (I). Only heating on a steam bath results in 38% yields. Hence the prepns. given by Fischer [*Ber.* 24, 1830(1891)] depend for the appearance of I upon the evapn. period rather than on the 40° "reaction" period. The temp. should be under 90° as a higher temp. lowers the yields (contradicts Kline and Acree (*C.A.* 24, 5527)). The best $HNO_3$ concn. is 55% (d. 1.35) which gives 58% yields, with the optimum amt. of $HNO_3$ (calcd. to 100% acid) of 170-200 g./100 g. xylose. A 2-hr. heating period at 60° is sufficient, followed by 0.5-hr. heating up to 90° and holding 10 min. Apparently the 60% yield limit is set by formation of xylonolactone, which does not oxidize to I. I was isolated as the neutral Ca salt.

G. M. Kosolapoff

R U Sci Res Inst Sulfites, Alcohols and Hydrolysis Industry.

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23

**Battery hydrolysis of the hemicelluloses of birchwood at atmospheric pressure.** N. V. Chalov and S. S. Glazman. *Zhur. Prikład. Khim.* (J. Applied Chem.) 21, 496–501 (1948); *Chem. Zentr.* (Russian Zone Ed.) 1949, I, 1433.—A study was made to det. those conditions which would require least acid for the hydrolysis of birch chips with $H_2SO_4$. Tests were made with 2, 3, 4, and 5% $H_2SO_4$. The chips contained 23.7% pentosans calcd. on the abs. dry matter. They yielded a max. of 17–18% of reducing substances. The presence of the latter retarded the hydrolysis. A multiple-stage hydrolysis is recommended, and a 4-stage hydrolysis battery is described. Best results were obtained with 3% acid and a reaction period of 4 hrs. The hydrolyzate obtained contained an av. of 9–13% of reducing substances. The $H_2SO_4$ consumption was 43–7 kg. per 100 kg. of reducing substances in the hydrolyzate. This is from ⅓ to ⅕ the acid required for the usual 1-stage operation and corresponds to the amt. used in the autoclave method.

M. G. Moore

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F G

ISOLATION OF METHANOL IN DIRECT COOLING OF WOOD PRODUCER GAS BY COUNTER-CURRENT ABSORPTION WITH AQUEOUS METHANOL. Chalov, N. V. (J. Appl. Chem., U.S.S.R., 1949, vol. 22, 654-658; Abstr. in Brit. Abstr., BII, Oct. 1950, 877). Approximate measurements for a semi-technical scale are presented. From gas, containing 4.55-9.09 g. of MeOH per cu. m., entering the absorption tower at 70-72° and leaving at 25-30°, 38-60% of MeOH is absorbed. The ratio of equilibrium concentration of MeOh in solution to that actually obtained in experiments varies from 0.75 to 1.5 when temperature of the MeOH solution leaving the tower varies from 47° to 39°. This is explained as due to differences in heat transfer coefficient, absorption, and desorption rates when the temperature is changed. It seems that those differences may be useful in design of absorption apparatus for wood producer gas.

B.A.

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**The nitric acid balance in the oxidation of xylose.** N. V. Chalov and Z. T. Filippova. *Zhur. Prikład. Khim.* (*J. Applied Chem.*) 22, 1273-8(1949).—Analysis of the products of oxidation of xylose by $HNO_3$ at elevated temp. in a N stream at 60° gave the following product distribution. With acid of d. 1.3, 50.6-52.5% of the $HNO_3$ enters the reaction and goes to NO and $NO_2$, 45-7% does not react, and 2-4% is lost. The $NO/NO_2$ ratio is 3.06-3.57. In order to lower the amt. of unchanged acid the use of more concd. acid (59.4%, d. 1.37) was studied. This leaves only 20% unreacted acid. The amt. of acid for optimum yield of trihydroxyglutaric acid is 170-200 g. $HNO_3$/100 g. xylose; hence, the best yield, 62.8%, was obtained with 200 g. 59% $HNO_3$. The amt. of $(CO_2H)_2$ formed ranges from 1.5 to 5.24%.

G. M. Kosolapoff

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**Evaluation of various methods of preparation of trihydroxyglutaric acid from xylose.** N. V. Chalov, O. G. Temir, Z. P. Gavrilova, and A. I. Krutchevnikova. *Zhur. Prikład. Khim.* 24, 274-82(1951); *J. Applied Chem. U.S.S.R.* 24, 301-9(Engl. translation).—The best method is that suggested by Sychev (*C.A.* 32, 4527[6]). The method of Plyushkin (*C.A.* 29, 5417[6]) is uneconomical and that of Aizenberg and Zil'berman (Russ. patent 60,288) requires too great amts. of $HNO_3$. For best results use 160 g. $HNO_3$ (d. 1.35-1.4) per 100 g. xylose 2 hrs. at 60°. G. M. K.

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GTRSPL Vol. 5-No. 1 Jan. 1952

Chalov, N.V., Temir, O.G., Gavrilova, Z.P. and Kruzhevnikova, A.I. (All-Union Scientific Research Institute of the Sulfide Liquor and Hydrolysis Industry). A comparative evaluation of the different methods of obtaining tri-oxyglutaric acid from xylose, 274-82

Akademiya Nauk, S.S.S R., Doklady Vol. 24, No 7

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CHALOV, N.V.

**Separation of trihydroxyglutaric and oxalic acids by decomposition of a mixture of their calcium salts with sulphuric acid.** N. V. Chalov and R. M. Myasnikova (*J. appl. Chem. USSR*, 1952, 25, 773—776).—When a mixture of Ca trihydroxyglutarate (**I**) and oxalate (**II**) is treated with $H_2SO_4$, **I** is first decomposed to yield the free acid, followed by **II**, and if the quantity of $H_2SO_4$ is practically equiv. only to the **I** present, a quant. separation of the two acids can be achieved. This method eliminates the loss of trihydroxyglutaric acid inherent in the usual industrial separation, based on fractional precipitation with $Ca(OH)_2$, of the mixed acids obtained in the oxidation of xylose with $HNO_3$.

R. C. MURRAY.

No. 7

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1. CHALOV, N.V.; VOLSKAYA, L.P.

2. USSR (600)

4. Water - Purification

7. Purification of waste water containing phenols, aldehydes, and methyl alcohol. Zhur. prikl. khim. 25 no.10, 1952.

9. **Monthly List of Russian Accessions**, Library of Congress, Janaury 1953. Unclassified.

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CHALOV, N.V.

Chemical Abst.
Vol. 48
Apr. 10, 1954
Cellulose and Paper

(1)

The influence of moisture content and chip height in gas generators on the yield of tars and acetic acid. N. V. Chalov. *Derevoperera-batyvayushchaya i Lesokhim. Prom.* 7, No. 12, 16-18(1953).—Wood chips (length 75-80 mm., width 50-150 mm., and thickness 10-16 mm.) from 20% birch and 80% spruce with a small amt. of pine and larch were carbonized in a continuous wood-gas producer plant; the combined distg. zone and dry zone height (I) was 3.47 m., and av. retention time was 1.30 hrs. The $H_2O$ content (II) of the chips and the yield (as % bone-dry wood) of tars (III) and AcOH (IV) by month for Jan. through Dec. were 41.6, 10.5, and 2.96; 41.7, 9.3, and 2.21; 43.4, 9.5, and 1.92; 45.1, 9.3, and 1.91; 42.5, 11.1, and 2.29; 36.9, 17.7, and 4.06; 38.2, 15.3, and 4.01; 33.5, 15.9, and 3.69; 33.5, 17.5, and 3.34; 40.7, 12.8, and 2.72; 43.0, 10.5, and 2.57; and 40.1, 11.1 and 3.16; av. monthly air temps. were −15.3, −10.7, −5.5, 2.0, 9.8, 18.2, 19.4, 20.2, 6.3, 6.9, −2.7, and −10.5°, resp. The effect of I on III and IV was studied in a gas generator 4.8 m. diam., 2.45 m. from fire-grate to charging hopper. I was 1.8, 1, 0.85, 0.68, 0.6, and 0.53 m.; II was 28.4, 27.8, 29.4, 28.3, 32.4, and 21.6; % beech in the beech-spruce mixt. 31.0, 26.7, 22.7, 31.5, 50.0, and 21.3; III was 17.50, 19.60, 20.80, 20.51, 23.90, and 23.40; and IV was 4.80, 4.91, 4.80, 4.90, 6.05, and 5.09, resp. In general, III and IV increased with decreasing I and II.

John Lake Keays

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Recovery of acetic acid from hydrolytic liquors. N. V. Chalov, B. F. Goryachikh, and V. A. Dushin. Gidroliz. i Lesokhim. Prom. 8, No. 1, 14-15(1955).—The rate of AcOH from the evapd. industrial neutralizate (original liquor had solids 8.05, AcOH 0.50, and HCOOH 0.0[illegible]%; it was evapd. to 35-40% of solids) was studied with the purpose of establishing the optimum conditions for the recovery of AcOH. The app. consisted of an automatic liquor feeder, liquor evapg. column, AcOH absorption column, receiver for the absorbed material, column [illegible] ing the [illegible] [illegible] [illegible] vacuum of up to 3 mm. [illegible] applied owing to the high resistance [illegible] [illegible] AcOH was extd. up to 91.5-99.6% from the liquor vapor, and no foam trouble was encountered. Details of the app. are given. T. Iurecic

CH

(2)

1. Vsesoyuznyy nauchno-issledovatel'skiy inst. gidroliznoy i sul'fitno-spirtovoy promyshlennosti (for Chalov and Goryachikh) 3. Yangi-yul'skiy gidroliznyy zavod (for Dushin) (Acetic acid)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, N.V.; GORYACHIKH, Ye.F.; VODOLAZOVA, L.Kh.

Investigation of liquid-vapor systems in binary phenol solutions
Gidroliz. i lesokhim. prom. 8 no.3:11-12 '55. (MLRA 8:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrolisnoy i sul'fitno-spirtovoy promyshlennosti
(Phenols)

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Chalov, N. V.

Utilization of acid water from wood dry distillation plants. N. V. Chalov. *Gidroliz. i Lesokhim. Prom.* 8, No. 4, 14-16 (1955).—Acid water, contg. 10-25% of dissolved tar, 3.0-5.0% of AcOH, 0.24-0.80% of HCOOH, 0.20-0.60% of volatile phenols (I), and 0.08-0.12% of MeOH accumulates in gas pipe lines at wood-generating plants. In the tar are *l*-glucosan, pentosans, $OHCCOCH_3$, $CH_3COCH_2OH$, lactones of hydroxy acids, glycol, and several other compds. Carbohydrates represent around 30% of the tar substances. To conc. tar and to recover AcOH two types of equipment were designed. One installation is a three-effect evaporator. The evapd. liquor vapors are treated with $Ca(OH)_2$ soln. which ppts. AcOH as $(AcO)_2Ca$. Vapors from the first effect are rectified to recover volatile phenols, MeOH, and other compds. The second installation consists of two-effect evaporators. AcOH is recovered from the first-effect vapors, and vapors from the second effect are used to moisten air going to the gas generator. The acid water is concd. to a degree where it contains 69-70% of the sol. tar, 4-6% of AcOH, and 24-28% of water. MeOH is recovered completely, I 45-50%, and AcOH 65-70%. Sol. tar might be useful as a source of glucose, EtOH, foundry binder, and heavy fuel oil. $Ca(OH)_2$ soln. absorbs up to 99% of AcOH, and the tech. $(AcO)_2Ca$ contains 74.1% of $(AcO)_2Ca$, 1.36% of $(HCOO)_2Ca$, and 13.2% of impurities. T. Jurecic

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Chalov, N.V.

2

**Production of trihydroxyglutaric acid from cottonseed hulls.** N. V. Chalov and E. F. Goryachikh. *Gidroliz. i Lesokhim. Prom.* 9, No. 3, 10-12(1950).—The sequence of operations in processing trihydroxyglutaric acid by oxidation of pentosans and uronic acids obtained in the hydrolysis of cottonseed and sunflower-seed hulls, corn husks, and hardwoods with $HNO_3$ is discussed. T. Jurecic

Vses. nauch.-issled. inst. gidrolizny i sulfit.-spirt. prom.

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

Separation of 2-furaldehyde and volatile phenols from wood resin. N. V. Chalov, L. V. Gordon, and S. Q. [illegible] Gidrolizn. i Lesokhim. Prom. 9, No. 5, 8-10 1956. — The authors report calcns. and the results of pilot plant expts. in which they succeeded in sepg. by fractional distn. raw 2-furaldehyde and phenols from the liquid phase obtained in the dry distn. of birchwood. T. Iurecic

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

Chem

**Concentration of 2-furaldehyde in the evaporation of hydrolyzate without heat losses.** N. V. Chalov, N. P. Mel'nikov, Yu. A. Tsirlin, and N. S. Postnikova. *Gidroliz. Lesokhim. Prom.* 9, No. 6, 8-10(1956). —An installation is described in which 2-furaldehyde (I) is obtained from the hydrolyzate with only a small consumption of steam. Vapors (II) from the hydrolyzate enter a tank desorber provided with a few plates and then go to heat exchangers. The condensate from the heat exchangers flows into a separator where 1 part is drawn off and the other part [illegible] to I is returned to the top of the desorber. The condensate, having at an equil. 7.5 times less I than II, runs off the bottom plate. The concn. of I in the final soln. is dependent upon the rate of condensate removal. The no. of theoretical plates is given by $n = [\log [(x_k/x_K)](PK/F) - 1] + 1]/\log (PK/F)] - 1$, where $x_k$ is the amt. of I in the top plate (mole %), $x_K$ is the amt. of I in the condensate, $P$ is the amt. of II in the desorber, $K$ is the phase equil. coeff., and $F$ is the amt. of condensate returning to the desorber from the separator. The optimum concn. of I in II is considered to be 3–6%. This low concn. promotes the sepn. of turpentine and MeOH. The course of the operation is: hydrolyzate is first evapd. in two steps. Vapors from the 1st evaporator go to heat exchangers and from there to the desorber. Vapors from the 2nd evaporator enter the desorber at the bottom. A 2nd set of evaporators receives the vapors from the desorber. The condensed vapors (III) are then pumped to a storage tank where turpentine is partially sepd. From there III enter a continuous fractionating col-

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CHALOV, N.V., MEL'NIKOV, N.P., TSIRLIN, YU.A...

umn (IV) with a dephlegmator and a cooler. MeOH fraction (85–90% MeOH) is drawn off the top, MeOH-turpentine fraction (40% MeOH and up to 10% of turpentine (V)) is drawn off at a lower level. After V is sepd. this fraction is dild. and returned to IV. Water-furaldehyde fraction is cooled and sepd. into raw I and water-furaldehyde layer. Raw I is rectified in a column operating under reduced pressure (discontinuously). The tech. I has 98% of pure I; the main and middle fractions are recycled. The loss of I during this operation is 5%. The layout of the Leningrad Hydrolytic Plant is described in detail.

T. Jurecic

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CHALOV, N.V.

CHALOV, N.V., kand.tekhn.nauk; GORYACHIKH, Ye.F.

Organic acids from vegetable raw material. Khim.nauka i prom. 2 no.4:458-461 '57. (MIRA 10:11)

(Acids, Organic)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

Chalov, N.V.

7

Concentration equilibrium of acetic acid in water solution vapor phase system. N. V. Chalov and O. A. Aleksandrova. *Gidroliz. i Lesokhim. Prom.* 10, No. 1, 14-16 [illegible] AcOH in water and AcOH-vapor phase [illegible] [illegible] at 2[illegible] 40, 60, and 8[illegible] were [illegible] The app. consisted of a water bath held at const. temp. (±0.02°) and of a glass column held 2-3° higher than the water bath to which a container with a manometer and an outlet was connected. Water vapor-AcOH mixt. was collected in a flask. AcOH was detd. by titration to phenolphthalein endpoint. The data agreed with the general equation $\log K = (0.029405 - 0.0001534x)t - 1.68707 + 0.015656x$, where $K$ was the phase equil. coeff., $t$ the centigrade temp., and $x$ the concn. of AcOH in water in percent by wt. The relation between the calcd. and exptl. values was within an error of less than 2%. T. Jurecic

Vsesoyuznyy nauchno-issledovatel'skiy institut gidrolizney i sul'fitno-spirtovoy promyshlennosti

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

Liquid vapor phase equilibrium [illegible]

[illegible] pressures [illegible]

[illegible]

and external heating (cf. Gillespie, [illegible] 40, 59[illegible] [illegible] distillate flow rate of 3–5 ml./min., and a total time of 3.5–4 hrs. At 760 mm. and 40% of HO[illegible] [illegible] phase II there was [illegible] [illegible] 50 mm. and 40.4% of I in II there was [illegible] At low concns. of I in II the amt. of I in III rose when the temp. was raised, but at higher concns. the amt. of water in III was increased. The 760-mm. equil. curve [illegible] 50 mm. curve at 44%, 100 mm. at 48%, and [illegible] [illegible]% of I in II. When the vapor pressure [illegible] [illegible] temp. were plotted against I [illegible] percentage [illegible] straight lines were [illegible] scale. This graph could be utilized in [illegible] in II and III. Plotting the percentage of I in [illegible] against the log of vapor pressure of water [illegible] straight line and the data of different authors [illegible]

[illegible]

Sulphite Alcohol Industry

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

Chalov, N. V.

CHALOV, N.V.; ALEKSANDROVA, O.A.

Liquid - vapor phase equilibriums in the system acetic acid - water at atmospheric and reduced pressures. Gidroliz. i lesokhim. prom. 10 no.6:10-12 '57. (MIRA 10:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrolisnoy i sul'fitno-spirtovoy promyshlennosti.
(Acetic acid) (Phase rule and equilibrium)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, N.V.; ALEKSANDROVA, O.A.

Equilibrium of acetic acid in the system gas-generator wood tar. Gidroliz. i lesokhim.prom. 11 no.8:8-11 '58. (MIRA 11:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrolizhoy i sul'fitnospirtovoy promyshlennosti.
(Acetic acid) (Wood tar)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, N.V.; ALEKSANDROVA, O.A.

Wood hydrolysis with gaseous hydrogen chloride at atmospheric pressure. Gidroliz. i lesokhim.prom. 12 no.1:14-18 '59. (MIRA 12:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitnospirtovoy promyshlennosti.
(Wood--Chemistry) (Hydrochloric acid)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, N.V.; GORYACHIKH, Ye.F.; LESHCHUK, A.Ye.

New method for the hydrolysis of wood by concentrated hydrochloric acid. Gidroliz.i lesokhim.prom. 12 no.3:3-5 '59. (MIRA 12:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti.
(Hydrolysis) (Hydrochloric acid) (Wood)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, N.V.; GORYACHIKH, Ye.F.; LESHCHUK, A.Ye.

New arrangement for the hydrolysis of wood by hydrochloric acid. Gidroliz i lisokhim.prom. 12 no.4:1-4 '59. (MIRA 12:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrolizno-sul'fitnospirtovoy promyshlennosti.
(Wood--Chemistry) (Hydrolysis)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, N.V.; ALEKSANDROVA, O.A.

Reducing the specific consumption of hydrogen chloride in hydrolysis. Gidroliz.i lesokhim.prom. 12 no.8:12-14 '59. (MIRA 13:4)

1. Nauchno-issledovatel'skiy institut gidrolisnoy sul'fitno-spirtovoy promyshlennosti.
(Hydrolysis) (Hydrochloric acid)

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LAYKEVICH, S.S.; BATUTIN, Yu.A.; CHALOV, N.V.

Use of automatic elevators by the Noril'sk expedition. Biul. nauch.-tekh.inform.VIMS no.1:51-55 '60. (MIRA 15:5)

1. Krasnoyarskoye geologicheskoye upravleniye.
(Noril'sk region--Hoisting machinery) (Automatic control)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, N.V.; LESHCHUK, A.Ye.; ALEKSANDROVA, O.A.

Hydrolysis of polysaccharides of plant tissue with concentrated hydrochloric acid and gaseous hydrogen chloride. Zhur. prikl. khim. 33 no.12:2743-2750 D '60. (MIRA 14:1)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spiritovoy promyshlennosti.
(Hydrochloric acid) (Polysaccarides)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, N.V.; AMAN, A.Kh.

Hydrolysis of hemicellulose components of pine wood with 30-36% hydrochloric acid. Zhur.prikl.khim. 34 no.7:1601-1608 Jl '61. (MIRA 14:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti.
(Hemicellulose) (Hydrolysis)

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CHALOV, N.V.; LESHCHUK, A.Ye.; KOROTKOV, N.V.; GORYACHIKH, Ye.F.; AMAN, A.Kh.; PAASIKIVI, L.B.; ALEKSANDROVA, O.A.

Hydrolysis of cellulose lignin by a 44-45% hydrochloric acid solution in a diffusion battery. Zhur. prikl. khim. 34 no. 12:2737-2745 D '61. (MIRA 15:1)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti.
(Lignin) (Hydrolysis)

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CHALOV, N.V.

Mechanochemical destruction of polysaccharides in the presence of sulfuric acid. Gidroliz. i lesokhim. prom. 15 no.7:4-7 '62. (MIRA 16:8)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitnospirtovoy promyshlennosti.
(Hydrolysis)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, N.V.; PAASIKIVI, L.B.

Hydrolysis of the polysaccharides of pine wood with 38-41% hydrochloric acid at 20°. Zhur.prikl.khim. 35 no.6:1347-1355 Je '62. (MIRA 15:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti.
(Polysaccharides) (Hydrolysis)

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CHALOV, N.V.; LAPPO-DANILEVSKIY, Yu.K.; GORYACHIKH, Ye.F.; BLINOVA, N.N.; ZHDANOVA, L.A.

Chemicomechanical degradation of linters in the presence of sulfuric acid. Sbor.trud.NIIGS 12:87-98 '64.

(MIRA 18:3)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

LESHCHUK, A.Ye.; CHALOV, N.V.

Equilibrium in the system polysaccharides- hydrolysis products - hydrochloric acid. Gidroliz. i lesokhim. prom. 18 no.5:10-13 '65. (MIRA 18:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-spirtovoy promyshlennosti.

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L 39032-66 EWT(m)/EWP(j) RM

ACC NR: AP6021756 (A) SOURCE CODE: UR/0328/66/000/002/0003/00006

AUTHOR: Chalov, N. V.; Leshchuk, A. Ye.; Kozlova, L. V.; Volkova, T. M.

ORG: VNIIGS

24
B

TITLE: Indices of hydrolysis of polysaccharides with 65-90% sulfuric acid at the equilibrium stage of the reaction

SOURCE: Gidroliznaya i lesokhimicheskaya promyshlennost', no. 2, 1966, 3-6

TOPIC TAGS: polysaccharide, hydrolysis, sulfuric acid, cellulose

ABSTRACT: The equilibrium in the system polysaccharides - sulfuric acid - water - products (glucose) was investigated. On a triangular diagram, the system under consideration ($H_2SO_4$ - water - glucose) is represented by a straight line. Graphical analysis of the hydrolyzate compositions showed that at room temperature this system consists of a solution of the compound $C_6H_{12}O_6 \cdot 1.37\ H_2SO_4$ in 62.% sulfuric acid. The hydrolysis of polysaccharides virtually comes to a halt at a certain concentration of acid and sugars because of the formation of compounds between $H_2SO_4$ and the hydrolysis products, determined as glucose, so that the true concentration of the latter in the solution drops to 62.5% by weight. The $H_2SO_4$-glucose compound is analogous to that formed by reacting cellulose with liquid hydrogen chloride or by hydrolyzing cellulose with 38-50% hydrochloric acid. From the data obtained, the minimum possible specific consumption of $H_2SO_4$ insuring the complete hydrolysis of cellulose and polysaccharides

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at 20°C was determined. It is suggested that the specific consumption of $H_2SO_4$ can be considerably reduced by raising the $H_2SO_4$ concentration and the temperature of the hydrolysis process. Orig. art. has: 3 figures.

SUB CODE: 07/ SUBM DATE: none/ ORIG REF: 009/ OTH REF: 004

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PHASE I BOOK EXPLOITATION 785

Baranov, V.I.; Morozova, N.G.; Serdyukova, A.S., Chalov, P.I.; and Shashkin, V.L., Compilers.

Spravochnik po radiometrii dlya geofizikov i geologov (Handbook on Radiometry for Geophysicists and Geologists) Moscow, Gosgeoltekhizdat, 1957. 198 p. 15,000 copies printed.

Ed.: Baranov, V.I.; Ed. of Publishing House: Koloskova, M.I.; Tech. Ed.: Gurova, O.A.

PURPOSE: The manual is intended for exploration geophysicists and geologists and it may be useful to students interested in the subject of radioactivity prospecting.

COVERAGE: The manual covers the field of radioactivity detection and the equipment and apparatus used in this type of prospecting and it describes a number of methods for field work. The manual deals only with the natural radioactivity of geochemical elements as they occur in the earth. Artificial radioactivity is not taken into account.

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The book surveys the radioactive elements and gives their essential characteristics. Terminology and units are defined and theories of radioactivity explained. Material on apparatus and applied prospecting is limited to about 50 pages. Of particular interest is Chapter VI, dealing with the problem of determining the geological age of any given formation by radioactive methods. There are 95 tables, 21 figures, 122 Soviet references and 54 English, 4 German, and 1 French reference.

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Ch. I. Radioactive Transmutation
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a) Soddy-Fajans displacement law 5
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c) Series disintegration of radioactive elements 6
d) Tables of radioactive elements 8
e) Mean energies of radioactive emissions given off during one moment of decay 10
f) Naturally occurring radioactive elements outside of series 24



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CHALOV, P.I.

Determination of uranium isotope composition ($U^{238}$, $U^{234}$) based on the ratio of alpha to beta radiation. Trudy Inst. geol. AN Kir. SSR no.9:227-230 '57. (MIRA 11:4)
(Uranium--Isotopes)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

SOV/137-58-8-16708

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 68 (USSR)

AUTHOR: Chalov, P.I.

TITLE: Electrical Precipitation of Uranium on a Copper Cathode (Elektroosazhdeniye urana na mednom katode)

PERIODICAL: Tr. In-ta geol. AN KirgSSR, 1957, Nr 9, pp 231-235

ABSTRACT: A study is made of the electrical deposition of U from an acetate medium on a Cu cathode, with the object of obtaining U preparations in layers of infinite thinness without the use of Pt cathodes. Simultaneously, a study was made of the coprecipitation of a thorium isotope $UX_1$. Precipitation was performed on Cu disks 40 mm in diameter and 0.5 mm thick; a revolving Pt cone served as anode. Cathode potential was monitored by a mercury-sulfate half cell. The electrolyte contained 1 mg U and 3 g Na acetate. Its volume was ~150 cc. In the majority of experiments the electrolyte also contained 0.2 cc glacial acetic acid. The following were found to be the optimum conditions for electrical precipitation of U: Cathode potential from -0.87 to -0.93 v, solution temperature 80-95°C, pH 5.75-5.89, electrolysis time 40-60 min. Under these conditions 95-96%

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SOV/137-58-8-16708

Electrical Precipitation of Uranium on a Copper Cathode

of the U and 50-60% of the $UX_1$ precipitated at the cathode. This often necessitates prior removal of the $UX_1$ from the solution.

V.M.

1. Uranium--Precipitation 2. Uranium--Electrodeposition 3. Cathodes--Performance 4. Electrolysis

Card 2/2

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CHALOV, P.I.; MUSIN, Ya.A.; PERVUKHINA, K.I.

Determining the comparative migration properties of the $UX_1$ ($Th^{234}$) in supergene uranium deposits. Zap. Kir. otd. Vses. min. ob-va no.1:113-124 '59. (MIRA 14:3)
(Thorium—Isotopes) (Uranium)

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

3(8) SOV/7-59-2-11/14

AUTHOR: Chalov, P. I.

TITLE: The Isotope Ratio of $U^{234}$ and $U^{238}$ in Several Secondary Minerals (Izotopnoye otnosheniye $U^{234}/U^{238}$ v nekotorykh vtorichnykh mineralakh)

PERIODICAL: Geokhimiya, 1959, Nr 2, pp 165-17o (USSR)

ABSTRACT: The isotopic ratio of $U^{234}$ and $U^{238}$ was determined by methods previously developed by the author (Ref 2). The α-activity was measured by means of the apparatus DA, β-activity was determined by means of the apparatus B-2 with the counter AS-2. The intensity was compared to the intensity of a standard sample of pitchblende. In order to check the method used, 6 samples were investigated by means of α-spectra by Professor V. V. Cherdyntsev at the problemnaya laboratoriya (Laboratory for Solution of Problems) of the kafedra eksperimental'noy fiziki (Chair of Experimental Physics) of Kazakhskiy gosudarstvennyy universitet (Kazakh State University) (Table 2). An investigation was made of 12 samples of "otenite" (a radium-bearing mineral), torbernite, and zeunerite from the oxidation zone; of 10 samples of schroeckingerite and pitchblende from

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SOV/7-59-2-11/14

The Isotope Ratio of $U^{234}$ and $U^{238}$ in Several Secondary Minerals

the cementation zone below the oxidation zone; and of 22 samples of pitchblende from the cementation zone (Table 1). It was shown that the radioactive equilibrium between $U^{234}$ and $U^{238}$ is disturbed since an impoverishment of $U^{234}$ takes place. There are 2 tables and 6 Soviet references.

ASSOCIATION: Institut geologii Akademii nauk Kirgizskoy SSR, Frunze (Institute of Geology of the Academy of Sciences of the Kirgizskaya SSR, Frunze)

SUBMITTED: October 6, 1958

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, P.I.; MUSIN, Ya.A.

Radiometric determination of the uranium-238 and thorium-234 content of solutions in the presence of other radioactive elements of the uranium series. Izv. AN Kir. SSR. Ser. est. i tekh. nauk 1 no.3: 113-118 '59. (MIRA 14:9)

(Radioisotopes)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

MUSIN, Ya.A.; CHALOV, P.I.

Comments on the application of gamma radiation from the products of radium decay as an indicator of the quantitative uranium content in ores. Izv. AN Kir. SSR. Ser. est. i tekh. nauk 1 no.3:119-125 '59. (MIRA 14:9)

(Radium--Decay) (Gamma rays) (Uranium)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

27.2400

S/169/62/000/006/052/093
D228/D304

AUTHOR: Chalov, P. I.

TITLE: Relative and "absolute" radioactivity measurements

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 6, 1962, 11, abstract 6B90 (Izv. AN KirgSSR, Ser. yestestv. i tekhn. n., 3, no. 1, 1961, 163-165)

TEXT: In a certain part of the literature the term absolute radioactivity measurement is understood to be a measurement method based on the effectiveness of registering a specimen's total radioactive radiation with allowance for absorption, particle scattering, the geometry of the measurements, and other factors. The author reckons this method, too, to be relative, like the method in which an instrument is directly calibrated by radioactive isotopes. The main difference is the way in which the recording system is calibrated. [Abstracter's note: Complete translation.]

Card 1/1

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, P.I.; TUZOVA, T.V.; MUSIN, Ya.A.

Isotopic $U^{234}/U^{238}$ ratio in natural waters and its use for nuclear geochronology. Geokhimiia no.5:404-413 My '64. (MIRA 18:7)

1. Institut of Physics and Mathematics, Academy of Sciences of the Kirghiz Soviet Socialist Republic, Frunze.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, P.I.; TUZOVA, T.V.; MUSIN, Ya.A.

Isotopic ratio $U^{234}/U^{238}$ in natural waters and its use in geochronology. Izv. AN SSSR Ser. geofiz. no.10:1552-1561 O '64. (MIRA 17:11)

1. Institut fiziki i matematiki AN Kirgizskoy SSR.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, P.I.; MUSIN, Ya.A.; TUZOVA, T.V.; MERKULOVA, K.I.

Isotope shift between $U^{234}$ and $U^{238}$ in secondary uranium minerals of some hydrothermal deposits. Atom. energ. 19 no.1:82-84 Jl '65. (MIRA 18:7)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

L 21934-66 EWA(h)/EWT(1)/EWT(m)/FCC GW

ACC NR: AP6014486

SOURCE CODE: UR/0089/65/019/005/0470/0472

AUTHOR: Chalov, P. I.; Tsevelev, M. A.

ORG: none

TITLE: Relative levels of fission fragment fallout from the stratosphere 19 7/ B

SOURCE: Atomnaya energiya, v. 19, no. 5, 1965, 470-472

TOPIC TAGS: stratosphere, radioactive fallout, troposphere, ruthenium, cesium, cerium, beta radiation, gamma radiation, fission product

ABSTRACT: The concentration of radioactive aerosols in the lowest atmospheric layers increases during the spring and summer, then decreases during the fall and winter. These seasonal variations are due to changes in the exchange rate between the air masses of the stratosphere and the troposphere. The relative level of the stratospheric fallout was determined by comparing the fission-product fallout density of the long-lived isotopes during the summer of 1962 when tropospheric fallout still could occur with the 1963 data when the fallout had to be of stratospheric origin only in view of the nuclear test ban. The fallout density was derived from the average beta + gamma activity of the monthly samples. The plot of these data as a function of time revealed that the total activity of $^{137}Cs$, $^{144}Ce$, and $^{106}Ru$ in the fallout during 1962 and 1963 exhibited variations usually observed only in the air layer directly above the ground. The 1962 maximum had to be attributed to an overlap of the stratospheric and tropospheric fallout. The 1963 maximum was due primarily

Card 1/2

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L 21934-66

ACC NR: AP6014486

to fission products from the stratosphere; it exceeded that 1962 maximum by a factor about 3. This was caused by the introduction of new fission products into the atmosphere during the 1962 tests, which reached the troposphere during the spring and summer of 1963. The cumulative fallout density and the related gamma dose during the nuclear test ban period is thus due mostly to the stratospheric fallout. Orig. art. has: 2 figures. [NA]

SUB CODE: 18, 04 / SUBM DATE: 13Feb65 / ORIG REF: 006

Card 2/2 nst

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

L 06186-67 EWT(1) RO/GW

ACC NR: AP6019518 SOURCE CODE: UR/0362/66/002/002/0205/0207

27
26
B

AUTHOR: Chalov, P. I.; Tsevelev, M. A.

ORG: Institute of Physics and Mathematics, Academy of Sciences KirgSSR (Akademiya nauk KirgSSR, Institut fiziki i matematiki)

TITLE: Wash out of radioactive aerosols by atmospheric precipitation below the cloud level

6

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 2, 1966, 205-207

TOPIC TAGS: radioactive fallout, radioactive aerosol, atmospheric precipitation, atmospheric cloud

ABSTRACT: Radioactive fallout stainless-steel samplers (collecting surface of 0.38 $m^2$) were set on a hill slope at 2070, 2477, and 2689 m above sea level during 0.1—0.5 mm/hr rainfalls in June 1963. Beta-radiation was determined with a B-2 radiometer and an SI-2B counter in dry residues of the collected rainfall water. The difference ($I_0$-$I_{2t}$) between the radioactivity of the lower and upper rainfall samples, attributable to fallout wash out by precipitation, fluctuated between 0.05 and 7.9 units, with greater values for Sc and lower values for Cu. Solid fallout radioactivity at the same points was generally lower (1.0—2.09) than

Card 1/2 UDC: 551.510.721

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"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

L 06186-67

ACC NR: AP6019518

comparable rainfall radioactivity (1.0—8.9 units). These results prove the entrainment of radioactive fallout in atmospheric precipitation and the existence of a dependence of the intensity of the process on a particular class of clouds producing rainfall. Orig. art. has: 2 tables.

SUB CODE: 04,18/ SUBM DATE: 10Apr65/ ORIG REF: 006/ OTH REF: 011

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, P.I.

Calculating the moisture content of flour. Khleb.i kond.prom. 6 no.6:21-23 Je '62. (MIRA 15:7)

1. Volgogradskiy trest khlebopekarnoy promyshlennosti.
(Flour)
(Moisture--Measurement)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

MAKKAVEYEV, N., prof.; CHALOV, R., inzh.

Methods of improving navigation conditions on the Ob' River.
Rech. transp. 22 no.9:45-47 S '63. (MIRA 16:10)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, R.S.

Stream pattern at the section of tributary confluence with the main river. Vest. Mosk. un. Ser. 5: Geog. 19 no.1:61-63 Ja-F '64. (MIRA 17:4)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

MAKKAVEYEV, N.I.; CHALOV, R.S.

Morphological indications of current accumulations in a river valley. Izv. AN SSSR. Ser. geog. no.3:84-89 My-Je '63. (MIRA 16:8)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Ob' Valley—Alluvium)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, R.S.

Dynamics of rifts and its quantitative characteristics.
Vop. geog. no.63:100-111 '63. (MIRA 17:3)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

MAKKAVEYEV, N.I.; CHALOV, R.S.

Surface relief development of river terraces and the symptoms of river bed erosion; based on the example of the upper Ob'. Izv. AN SSSR Ser. geog. no.4:120-125 '64 (MIRA 17:8)

1. Moskovskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, R.S.

Mechanism of the riverain sandbar formation. Izv. Vses. geog. ob-va. 96 no.5:433-434 S-O '64. (MIRA 17:12)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

MAKKAVEYEV, N.I., prof.; LAPTEV, M.I.; MITYAKOVA, M.N.; KONDRAKHOVA, Ye.I.; SHANKIN, P.A.; RZHANITSYN, N.A.; RABKOVA, Ye.K.; VYKHLOV, K.P.; CHALOV, R.S.

[Planning the navigable channels of unregulated rivers.] Proektirovanie sudovykh khodov na svobodnykh rekakh. Moskva, Transport, 1964. 261 p. (Moscow. TSentral'nyi nauchno-issledovatel'skii institut ekonomiki i ekspluatatsii vodnogo transporta. Trudy, no. 36). (MIRA 18:12)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, V.G. (Leningrad)

New test for the functional prognosis of fenestration of the labyrinth in otosclerosis. Zhur. ush., i gorl. bol. 20 no.6:45-48 N-D '60. (MIRA 15:2)

1. Iz kafedry bolezney ukha, gorla i nosa (zav. - zasluzhennyy deyatel' nauki prof. K.L.Khilov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.

(LABYRINTH (EAR)--SURGERY) (OTOSCLEROSIS)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

VASIL'YEV, A.I., kand.med. nauk; CHALOV, V.G.

Substantiation of the preservation of the head malleus in the fenestration of the labyrinth. Zhur. ush., nos. i gorl. bol. 23 no.4:3-6 Jl-Ag'63. (MIRA 16:10)

1. Iz kafedry otorinolaringologii (nachal'nik - zasluzhennyy deyatel' nauki prof. K.L.Khilov) Voyennomeditsinskoy ordena Lenina akademii imeni S.M.Kirova.
(LABYRINTH (EAR) — SURGERY)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

VASIL'YEV, A.I., kand. med. nauk; CHALOV, V.G. (Leningrad)

Role of the muscles of the tympanic cavity in the mechanism of sound conduction in an experiment. Zhur., ush., nos. i gor. bol. 24 no.2:9-12 Mr-Ap '64 (MIRA 18:1)

1. Iz kafedry otolaringologii (nachal'nik zasluzhennyy deyatel' nauki prof. K.L. Khilov) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, V.I.; LIPIN, B.V.

Smelting copper-zinc concentrates in suspension. TSvet. met. 35 no.7:29-31 Jl '62. (MIRA 15:11)
(Zinc—Metallurgy) (Copper—Metallurgy)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

L 21177-66 EWT(d)/EWT(m)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(1) JD/HM

ACC NR: AP6007921 (N) SOURCE CODE: UR/0125/66/000/002/0069/0071

37
B

AUTHOR: Koval', A. B.; Chalov, V. I.

ORG: Institute of Electric Welding im. Ye. O. Paton, AN UkrSSR (Institut elektrosvarki AN UkrSSR)

TITLE: System for controlling the motion of the electron beam in welding electron guns

14 18

SOURCE: Avtomaticheskaya svarka, no. 2, 1966, 69-71

TOPIC TAGS: electron beam welding, electron beam motion, electron beam welder, motion control

ABSTRACT: A device for automatic control of the beam motion in electron-beam welders has been developed. The device employs two electromagnetic fields perpendicular to each other, both of which are time functions of the same frequency. In a general case, the focal point of the beam travels along an ellipse with axes whose lengths are determined by the current in magnetic coils. When current is the same in both coils, the ellipse becomes a circle. The device is especially effective in welding circular or elliptic joints in the horizontal plane, such as occur in joining tubes to the tube plate. It eliminates the need for complicated positioning and rotating attachments and greatly simplifies the design of electron-beam welders. Orig. art. has: 4 figures. [DV]

14

SUB CODE: 13 SUBM DATE: 08Feb65/ ATD PRESS: 4222

UDC: 621.791.85

Card 1/1 BK

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

CHALOV, V. P. PA 8/49T32

USSR/Chemistry - Mercury Compounds Apr 48
Chemistry - Mercury Salts

"Symmetrization of Mercury-Organic Salts Containing an Amino Group in the Nucleus," V. P. Chalov, 2 pp

"Zhur Obshch Khim" Vol XVIII (LXXX), No 4

Shows that symmetrization of sodium p-aminophenyl-mercurhyposulfate is completed by boiling few minutes with an aqueous solution of hyposulfite. Same method applicable to mercury organic salts with a dialkylamino group in the nucleus. Submitted 21 Feb 1947.

8/49T32

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

L 08257-67 EWT(d)/EWT(v)/EWT(k)/EWT(h)/EWP(1)

ACC NR: AP6029953 (A, N) SOURCE CODE: UR/0413/66/000/015/0131/0132

INVENTORS: Fal'kov, L. G.; Rutskiy, V. V.; Simkin, Ye. L.; Rubin, A. Ya.; Narinskiy, F. I.; Bogolyubov, S. A.; Shakhovnina, G. V.; Chalov, V. S.; Rabinov, A. I.; Pivkov, P. M.; Ivanov, K. V.

ORG: none

TITLE: Movable apparatus. Class 49, No. 184584

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 131-132

TOPIC TAGS: metalworking, gas welding, metal welding, welding equipment, welding technology, milling machine

ABSTRACT: This Author Certificate presents a movable apparatus for machining the edges prior to welding two large objects. The apparatus contains a milling head mounted on self-propelled carriages. The head is fed axially along the outline of a detail by a pantographic copying mechanism. To increase the efficiency and the accuracy in milling the edges located on any plane upon an immovable structure, the self-propelled carriages are placed on the surfaces being machined (see Fig. 1). The apparatus itself is provided with an auxiliary milling head for machining the opposite edge facing the first one. The edges are separated by gas cutting torches placed in front of the moving apparatus.

Card 1/2 UDC: 621.914.37-182.3:621.791.945.021

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

L 09257-67

ACC NR: AP6029953

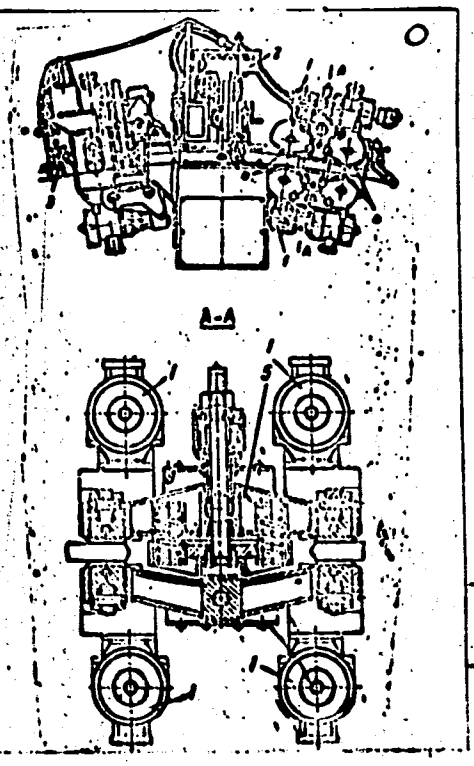


Fig. 1. 1 - self-propelled carriages; 2 - milling heads; 3 - gas cutting torches; 4 - running rollers; 5 - coupling device

Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 20May64

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

DUBROVITSKAYA, N.I.; FURST, G.G.; CHALOVA, T.A.

Biological characteristics of the cacao tree raised in a greenhouse. Biul. Glav. bot. sada no.55:114-122 '64. (MIRA 18:11)

1. Glavnyy botanicheskiy sad AN SSSR.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

KOLOSOV, A.K.; CHALOVA, Ye.A.

International comparisons of the national standards of the volt for the period 1939-1959. Trudy inst. Kom. stand., mer i izm. prib. no.52:5-14 '61. (MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im. D.I. Mendeleyeva.
(Electric standards)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

KOLOSOV, A.K.; SVETLAKOVA, L.F.; CHALOVA, Ye.A.

Study of nonsaturated standard components at increased and decreased temperatures. Trudy inst. Kom. stand. mer i izm. prib. no.67:12-27 '62. (MIRA 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni Mendeleyeva.

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

GLAGOLEVA, Ye.P.; GRADSKAYA, N.N.; KOLOSOV, A.K.; MYULLER, V.V.; SAVUSHKINA, A.S.; CHALOVA, Ye.A.

New small-size e.m.f. meters. Nov.nauch.-issl.rab.po metr. VNIIM no.4:4-6 '64. (MIRA 18:3)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

KHARAKOZ, A.Ye.; CHALOVA, Ye.P.; BABENKO, V.G.; BLESHINSKIY, S.V.; MUSTAYEV, A.K.

Complex formation in the systems consisting of phosphoric acid - alkali - sesquioxides. Izv.AN Kir.SSR.Ser.est.i tekh.nauk 4 no.9:141-147 '62. (MIRA 16:4)
(Phosphoric acid) (Alkalies) (Iron oxides)
(Complex compounds)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

BLESHINSKIY, S.V.; KHARAKOZ, A.Ye.; CHALOVA, Ye.P.; ALTYNNIKOVA, P.M.; OSIPOVA, T.P.

Phosphate method for stripping rare-earth minerals. Izv. AN Kir. SSR. Ser. est i tekh. nauk 5 no.4:17-21 '63. (MIRA 16:10)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

BLESHINSKIY, S.V.; KHARAKOZ, A.Ye.; LUKIN, I.N.; BABENKO, V.G.; CHALOVA, Ye.P.; Prinimali uchastiye: ABRAMOVA, V.F.; VINOGRADOV, V.P.; USUBAKUNOV, M.; GORBUNOV, V.D.; OSIPOVA, T.P.; NAGAYEVA, A.G.; MEDVEDEVA, V.A.; ALTYNNIKOVA, P.M.

Fluosilicic method for separating rare-earth elements. Izv. AN Kir. SSR. Ser. est. i tekh. nauk 5 no.4:23-24 '63. (MIRA 16:10)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

BLESHINSKIY, S.V.; KHARAKOZ, A.Ye.; ABRAMOVA, V.F.; VINOGRADOV, V.P.; BABENKO, V.T.; KACHKIMBAYEVA, S.A.; Prinimali uchastiye: USUBAKUNOV, M.; NAGAYEVA. A.G.; GORBUNOV, V.D.; MEDVEDEVA, V.A.; CHALOVA, Ye.P.; ALTYNNIKOVA, P.M.

Method for separating rare-earth elements based on the thermal dissociation of sulfates. Izv. AN Kir. SSR. Ser. est. i tekh. nauk 5 no.4:25-26 '63. (MIRA 16:10)

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

L 62929-65 EPA(s)-2/EWT(m)/EPF(c)/EWP(t)/EWP(b)/EPF(n)-2 IJP(c) JD/JG

ACCESSION NR: AP5020501 UR/0078/65/010/008/1853/1856
546.641+546.284'32'161

AUTHOR: Chalova, Ye. P.; Bleshinskiy, S. V.

TITLE: Interaction between rare earth chlorides of the yttrium group and sodium fluosilicate

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 8, 1965, 1853-1856

TOPIC TAGS: dysprosium compound, gadolinium compound, yttrium compound, sodium compound, fluorine compound, silicate, chloride, chemical precipitation

ABSTRACT: The precipitation of dysprosium, gadolinium, and yttrium from dilute aqueous solutions of their chlorides by sodium fluosilicate $Na_2SiF_6$ was studied at 25°C in order to determine the chemical species in which the rare earth elements precipitate at various ratios of the reacting components. The methods of solubility, pH measurement, electrical conductivity, and determination of the weight of the precipitates were employed. The following reaction is thought to take place:

$$2GdCl_3 + Na_2SiF_6 + 2H_2O \rightarrow 2GdF_3 + SiO_2 + 4HCl + 2NaCl$$

Card 1/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

L 62929-65

ACCESSION NR: AP5020501

X-ray analysis of the gadolinium precipitate showed lines characteristic only of gadolinium fluoride. It was found that all three rare earth elements precipitate completely when the molar ratio of $Na_2SiF_6$ to the rare earth chloride has reached 0.6. Below this value, the solutions are colloidal in character. Orig. art. has: 3 tables, 2 formulas.

ASSOCIATION: Institut neorganicheskoy i fizicheskoy khimii Akademii nauk KirgSSR (Institute of Inorganic and Physical Chemistry, Academy of Sciences, KirgSSR)

SUBMITTED: 23Dec63 ENCL: 00 SUB CODE: IC

NO REF SOV: 016 OTHER: 004

dm

Card 2/2

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1"

"APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000308120006-1

TSVETKOV, P., inzh.; CHAL'OVSKA, Sl., inzh.; RADEVA, M., inzh.

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