1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

CA

"RiE" a new apparatus for filtering in vacuo. R. Ripan. *Bul. soc. stiinte Cluj* 7, 224-6(1933).—A simple suction filtration app. that allows sepn. of the original liquor and washings is described.

C. E. P. Jeffreys

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

Ca

10

Formation of metallic salicylates with urotropine. R. Ripan and S. Cosma (Univ. Cluj, Rumania). *Ann. sci. univ. Jassy* I, 29, 51–66(1943).—The following ammine complexes were prepd. by treating the salt in hot H_2O with salicylic acid (X) in hot EtOH and an excess of urotropine (Y). Their formulas were detd. by analysis for the metal and for N. $ZnX_2Y_2.3H_2O$ from $Zn(NO_3)_2.6H_2O$; $ZnSO_4Y.10H_2O$ and $ZnX_2Y.2H_2O$ (I) from $ZnSO_4.7H_2O$; I also from $ZnCO_3$ or $Zn(OAc)_2.2H_2O$; $CdNO_3XY.11H_2O$ and $Cd(NO_3)_2XY.7H_2O$ from $Cd(NO_3)_2.4H_2O$; $CdX_2Y.5H_2O$ from $Cd(OAc)_2.2H_2O$; HgX_2Y_2 from $HgNO_3.nH_2O$ and fuming HNO_3; $Hg_2X_2Y_2$ from $Hg(NO_3)_2.nH_2O$ and fuming HNO_3; $CuXY.5H_2O$ from $Cu(NO_3)_2.3H_2O$ or $CuSO_4.5H_2O$; $Cu_2X_2Y.5H_2O$ from $CuOAc.H_2O$; Cu_4X_4Y from $Cu(NO_3)_2.3H_2O$ and HNO_3; $Co_2X_4Y_4.10H_2O$ from $Co(OAc)_2.4H_2O$ or $CoCO_3$; and $NiX_2Y.3H_2O$ from $Ni(OAc)_2$. The ammines obtained from alk. soln. are hydrated, from acid soln., anhyd. The XY ammines are more sol. than the Y benzoates, less sol. than the nitrates and acetates, and their degree of hydration is less than that of the inorg. acid-Y ammines. Higher orders of ammines are formed in acid soln., e.g. Cu_4X_4Y. Slightly dissocd. metallic salts like the acetate or salicylate tend to form ammines poorer in mols. of Y. The structure will be studied in a later note. Janet E. Austin

A S M - S L A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

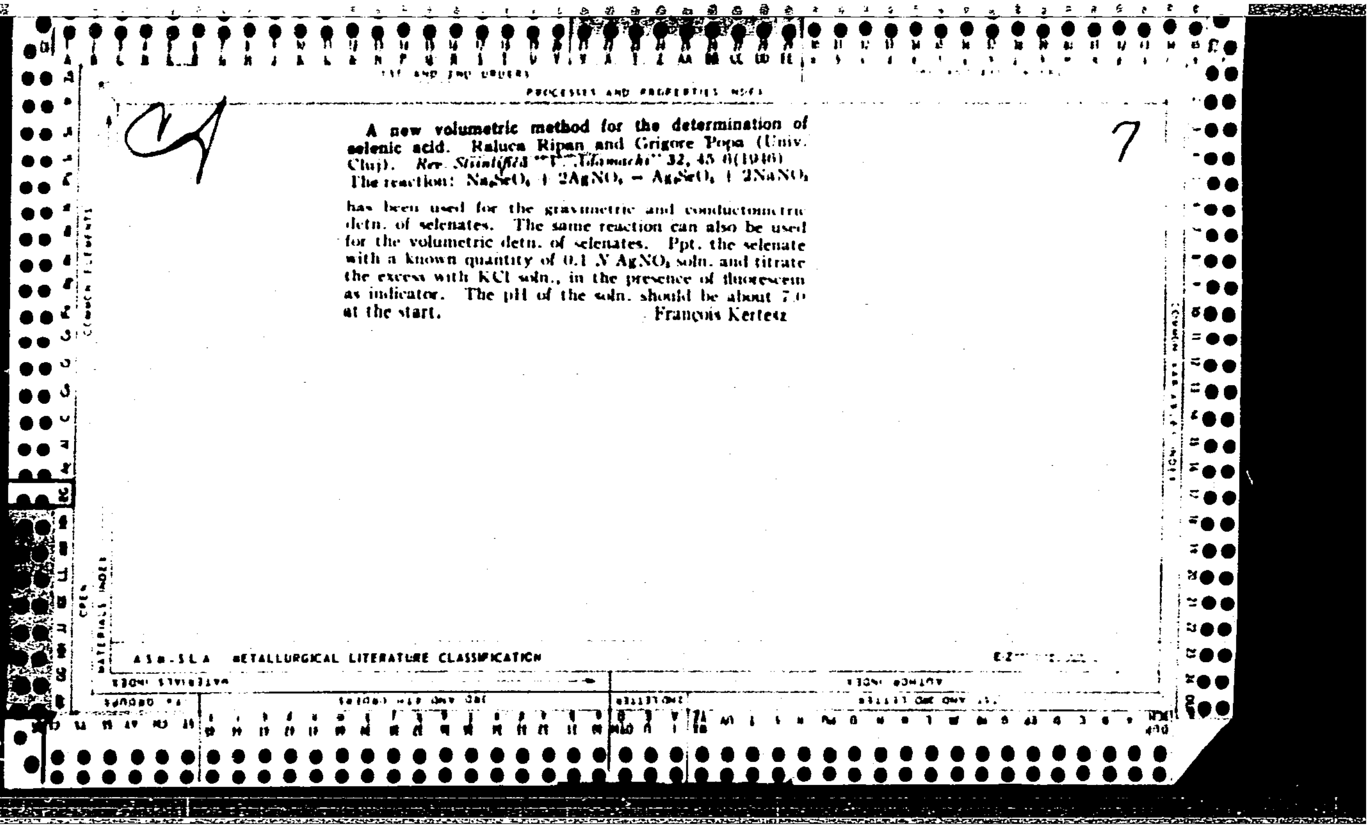
PROCESSES AND PROPERTIES INDEX

CA

7

The determination of tellurium ion as tellurium and its separation from bismuth. R. Ripan and C. Gh. Macarovici (Univ. Cluj-Temesvar). *Bull. sect. sci. acad. roumaine* **26**, 283-91(1944)(in French); *Chem. Zentr.* 1944, II, 985.—To the slightly acid or alk. Te^{4+} soln. (not more than 50 mg. Te) add 10-12 cc. concd. HCl and dil. to 150 cc. Add 3-4 g. KI, boil, add 25 cc. of satd. SO_2 soln. and boil until the colloidal Te separates. Add another 15-25 cc. of the SO_2 soln. and again boil. After a few min. decant through a filtering crucible and wash the ppt. with 2% KI soln., then 3 times with hot water, 1-2 times with cold water, and finally with alc. and ether. After drying *in vacuo* weigh the Te and subtract 8.5%. The resulting value is within ± 0.5% of the truth. M. G. Moore

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

CA

7

A new volumetric method for the determination of selenic acid. Raluca Ripan and Grigore Popa (Univ. Cluj). *Rev. Stiintifica "V. Adamachi"* 32, 45-6(1946). The reaction: $Na_2SeO_4 + 2AgNO_3 = Ag_2SeO_4 + 2NaNO_3$ has been used for the gravimetric and conductometric detn. of selenates. The same reaction can also be used for the volumetric detn. of selenates. Ppt. the selenate with a known quantity of 0.1 *N* $AgNO_3$ soln. and titrate the excess with KCl soln., in the presence of fluorescein as indicator. The pH of the soln. should be about 7.0 at the start.

François Kertesz

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

6

Physicochemical studies on the constitution of hetero poly acids. V. 12-Tungstosilicic acid. R. Ripan and I. Popper. *Bul. Soc. Stiinte Cluj* 10, 85-91(1948); C.A. 43, 56h.—Conductometric titration of $H_8[Si(W_2O_7)_6].xH_2O$ with KOH gave an inflection point for equivs. of H, corresponding to $H_8Si(W_2O_7)_6 + 16KOH = K_4SiO_4 + 6K_2W_2O_7 + 12H_2O$. The indicated existence of the pyrotungstate radical was affirmed by further titration of the alk. soln. with $AgNO_3$. Three inflection points were obtained corresponding to: $H_8Si(W_2O_7)_6 + 16KOH + 6AgNO_3 = 6KAgW_2O_7 + K_4SiO_4 + 6KNO_3 + 12H_2O$; $H_8Si(W_2O_7)_6 + 16KOH + 10AgNO_3 = 6KAgW_2O_7 + Ag_4SiO_4 + 10KNO_3 + 12H_2O$; $H_8Si(W_2O_7)_6 + 16KOH + 16AgNO_3 = 6Ag_2W_2O_7 + Ag_4SiO_4 + 16KNO_3 + 12H_2O$. Gravimetric detns. on the resulting solns. confirmed these equations. **VI. The periodic acids.** Raluca Ripan and Alexandru Duca. *Ibid.* 130-6.—Pure 0.01 *N* and 0.02 *N* H_5IO_6 was titrated, resp., with 0.1 *N* KOH, NaOH, and $AgNO_3$ and 0.02 *N* guanidine carbonate. All gave only two inflection points corresponding to one and five equivs. of hydrogen, hence 4 of the H ions are bound more strongly than the fifth.

D. S. Sears

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

2

Concentrated solutions of phosphoric acid. Raluca Ripan and C. Liteanu (Univ. Cluj, Rumania). *Acad. Rep. Populare Romîne, Bul. Ştiinţ.* A., 1, 387-96(1949).—Aq. solns. of H_3PO_4 contain a certain no. of $H_6(PO_4)_2$ mols. with 3 totally dissocd. hydrogens. That explains why the dissocn. const. of H_3PO_4 increases with its concn. in H_2O. (Boric and arsenic acids behave similarly.) In a soln. of 8.514 mols. H_3PO_4/l. H_2O the concn. of $H_6(PO_4)_2$ was 3.752 and the dissocn. const. 0.141, as compared with $H_6(PO_4)_2$ concn. 0.0043 and dissocn. const. 0.0102 for a concn. of 0.144 mols. H_3PO_4/l. Gerhard Aufleger

1951

C A
1951

Analytical Chemistry

The analysis of light alloys. I. A new gravimetric method for the rapid determination of aluminum. Raluca Ripan and I. Parvu (Univ. Cluj, Rumania). *Acad. Rep. Populare Romane, Bul. Stiint.* A, 1, 1007-11(1949). A neutral soln. of an Al salt contg. not more than 0.06 g. Al_2O_3 in 20-25 ml. H_2O is heated to 60-70° and 4.5 ml. of alc. benzoic acid soln. (3.5 g. in 40 ml. EtOH) is added. The mixt. is boiled, stirred, and 5 ml. of a fresh 3% soln. of urotropin in H_2O is added dropwise. After pptn., the soln. is boiled for another 5-10 min. with continuous stirring. The soln. is then filtered through a filter crucible and washed 10 times with a small quantity of a hot wash soln. prepd. by boiling 5 ml. urotropin soln. in 500 ml. H_2O for 2 min. and then mixing with 6 ml. of the benzoic acid soln. as was used for the pptn.; then washed 4-5 times with 2% EtOH in H_2O. The mixt. is dried at 100-105° for 1.5 hrs. and weighed. It is possible to transform the ppt. into Al_2O_3, which is less hygroscopic than the one obtained by classical methods. By the same method other trivalent elements can be detd. and also easily sepd. from bivalent and univalent cations.

Gerhard Aulleger

CA

6

A study of the preparation and constitution of periodic acids II. Raluca Ripan and A. Duca (Univ. Cluj, Rumania). *Analele Acad. Rep. Populare Romîne, Sect. Stiinte Mat., Fiz. Chim., Ser. A*, 2, *Mem.* 11, 14 pp. (1949)(French summary). To prep. $H_4I_2O_9$: (*a*) A concd. soln. of KIO_4 is boiled with the equiv. amt. of aq. $BaCl_2$. $2KIO_4 + H_2O + 2BaCl_2 = Ba_2I_2O_9 + 2KCl + 2HCl$; $Ba_2I_2O_9 + 2H_2SO_4 = H_4I_2O_9 + 2BaSO_4$. (*b*) When boiled in water KIO_4 is transformed quant. into $K_4H_2I_2O_{10}$, which forms $Ag_4I_2O_9$ when treated with $AgNO_3$. Dil. HCl is added to the hot soln. of $Ag_4I_2O_9$ (temp. of water bath). The $H_4I_2O_9$ crystallizes on cooling. (*c*) CO_2 is passed for 3-4 hrs. over a *N* H_5IO_6 soln. The CO_2 is then removed by heating. The cryst. residue (acid) is dissolved in the min. amt. of H_2O and recrystd. Unchanged H_5IO_6 remains in soln. The acid was thus prepd. in pure form. This method of prepn. establishes the formula of the acid: $H_5IO_6 + HIO_4 = H_4\left[I\begin{matrix}IO_6\\O_3\end{matrix}\right] + H_2O$. The acid can be titrated conductometrically with 0.1 *N* KOH (2 inflection points) or with 0.1 *N* $AgNO_3$. $H_4I_2O_9$ is colorless and stable.

Gerhard Autleger

CA

2

Physicochemical study of the constitution of heteropolyacids. VII. Aqueous solutions of boric acid. Raluca Ripan and C. Liteanu (Univ. Cluj, Rumania). *Analele Acad. Rep. Populare Romîne, Sect. Stiinte Mat., Fiz. Chim., Ser. A, 2, Mem.* 5, 24 pp. (1950)(French summary); cf. *C.A.* 43, 3741i. (a) Boric acid does not conform to Ostwald's diln. law; its dissocn. const. increases with increase in concn. owing to the formation of $H_4(BO_3)$ in the soln. (b) The dissocn. const. decreases even below $c = 0.1$ *M*. (c) In a concd. soln. the anion H_2BO_3 undergoes hydration (1) $BO_3H_2^- + nH_2O \rightleftarrows [BO_3H_2.nH_2O]^- = [(BO_3O_n.)H_{(2n+2)}]^-$. When neutralized to pH = 6 the following reaction takes place: (2) $BO_3O_n.H_{(2n+2)} + mKOH = [[BO_3O_n]H_{(2n+2)-m}]K_m + m\,H_2O$. G. A.

1957

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1951

Metallurgy and Metallography

4

A new procedure for the preparation of bismuth from sulfide ores. Raluca Ripan and Candin Liteanu (Univ. Cluj, Romania). *Acad. Rep. Populare Romîne, Bul Stiint., Ser. Mat., Fiz., Chim.* 2, 257-68(1950)(French summary).—Pulverized ore contg. 37.5% Bi is exposed at 550° to a strong current of Cl. Bi chlorides distils (while the mixt. is heated to 700°) and recovered in special glass condensers, dissolved in H_2O, acidified with HCl, and filtered if necessary. The residue in the chlorination tube is also treated with concd. HCl, filtered, and the 2 filtrates united to prepare (a) pure metallic Bi or (b) Bi subnitrate. (a) The filtrate is brought to a pH of about 2 with concd. NH_4OH; yellow BiOOH ppts quantitatively. It is washed by decanting until only smal amts. of Fe and no Cu are detectable, treated with concd HCl, filtered, and 5% excess HCl is added. Fe bars ar then inserted on which Bi deposits within 24 hrs. The mixt is then heated to 60-70° to remove AsH_3 and SbH_3, coole and decanted 15 times with 2% HCl water until no Fe ca be detected, filtered, and washed with H_2O until free of Cl^- then with EtOH and Et_2O. The yield is 88%. (b) Th filtrate is treated with an excess of NH_4OH. Bi and F ppt. as hydroxides and the Cu complex is washed out b decanting. Pptn. is dissolved in concd. HNO_3, filtered NH_4OH is added to the soln. but not enough to ppt. hy droxides. On addn. of H_2O_2, Bi ppts. quantitatively as th subnitrate (at pH approx. 2), decanted 6-7 times with HNO water (pH = approx. 2), then 6-7 times with distd. H_2O filtered, dried. The yield as Bi equals 92%. G. A.

(7)

C.a
1951

Determination of gold in tellurium ores by the fire assay. I. Raluca Ripan and R. Paladi. *Acad. Rep. Populare Romîne, Bul. Ştiinţ.*, Ser. Mat., Fiz., Chim. 2, 373-80 (1950)(French summary).—Losses of Au were frequently observed in the fire assay of Au-Te ores. It was found that all Au was absorbed by the cupel when the ratio between Au and Te was anywhere near 1:3; 3-10% Au was lost at lower Au concns. To avoid or minimize losses it is recommended to use twice as much flux as usual (1 Au: 30 Pb) in the cupellation or extn. of the Te with HNO_3. G. A.

RIPAN, Raluca

The preparation of pure ammonium molybdate, $(NH_4)_6Mo_7O_{24}.nH_2O$, from domestic molybdenite. Raluca Ripan and A. Duca (Univ. Bucharest). *Acad. Rep. Populare Romîne, Bul. Stiinț. Ser. Mat., Fiz., Chim.* 2, 381-6(1950) (French summary).—Ore contg. 50% MoS_2 is roasted for 5-6 hrs. at 650° with continuous stirring in a special furnace until 60-70% is oxidized. The oxidation is continued with concd. HNO_3 in porcelain containers until all MoS_2 is converted to MoO_3. Twice the vol. of boiling H_2O is added. The mixture is then filtered through a Büchner funnel and washed with hot 5% HNO_3. The ppt. is transferred to a flask, treated with hot distd. H_2O (5:1), and heated to boiling in a waterbath. NH_3 is added, with shaking; the soln. is then filtered. The filtrate is boiled to expel the excess NH_3, dild. with cold H_2O, and treated while being stirred with a slight excess of concd. HNO_3. Molybdic acid ppts., and is filtered on a Büchner funnel, washed 5-6 times with H_2O acidified with a few drops of HNO_3, then 5-6 times with distd. H_2O. If necessary for further purification the acid is transferred to a flask, an equal vol. of hot H_2O is added, and NH_3 is introduced while the mixture is shaken. It is then filtered, and the filtrate is concd. on a steam bath, filtered, and recrystd. Yield 98-99%. G. A.

Ripan Raluca

7

A rapid gravimetric method to separate aluminum from zinc. Raluca Ripan and I. Pârvu (V. Babeş Univ., Cluj, Romania). *Acad. rep. populare Romîne, Filiala, Cluj, Studii cercetări ştiinţ.* 3, No. 3/4, 36–43(1952).—Al is pptd. as Al(BzO)$_2$OH with BzOH in the presence of urotropine (I) by boiling at a pH of 3.5 to 5, the pH which will establish itself automatically if I is boiled in acid solns. Under those conditions, Zn will not ppt. The ppt. is cryst. and can be easily filtered on a Gooch crucible, as it does not adsorb Zn. A single pptn. will lead to a complete sepn. and detn. The results are good.

Werner Jacobson

Chem 2

Ripan, R.

6

Chem

2

A gravimetric method of separating lead sulfate from silica. R. Ripan and C. Stanisav (V. Babes, Univ., Cluj). *Acad. rep. populare Romane, Filiala Cluj, Studii cercetări stiinț.* 3, No. 3/4, 44-50(1952).—The method is based on the fact that $Na_6(PO_3)_6$ (I) dissolves $PbSO_4$, but not SiO_2. It is of special interest for sulfidic ores contg. Pb, which upon treatment with 3 HCl + 1 HNO_3, will form both $PbSO_4$ and SiO_2. Ore after such treatment is evapd. to dryness with concd. H_2SO_4, in order to make sure that all the Pb is transformed into $PbSO_4$ and that all the SiO_2 is insol., then the residue is extd. with a soln. of $Na_6(PO_3)_6$, and the Pb dissolves as complexes: $Na_2[Pb_2(PO_3)_6]$ and $Na_4[Pb(PO_3)_6]$. From the soln. obtained by treatment with H_2SO_4 the $PbSO_4$ is again pptd., after filtering off earlier the SiO_2. W. J.

RIPAN, R.

5

Chem

A new gravimetric method for the determination of sulfate in the presence of lead ions. R. Ripan and M. Vancea. (Romanian Acad. Sci., Cluj). ~~Acad. rep.~~ *populare Romîne, Filiala Cluj, Studii cercetări ştiinţ.* 3, No. 3/4, 51-3(1952).—The method is based upon the fact that $PbSO_4$ dissolves in $[Ba(PO_3)_6]Ba_2$, liberating the equiv. amt. of $BaSO_4$, which is filtered off, heated, and weighed. $[Ba(PO_3)_6]Ba_2$ is prepd. from $BaCl_2.2H_2O$ and $Na(PO_3)_6$. Werner Jacobson

2

Ripan, Raluca

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3000

The structure of ammonium molybdate, $(NH_4)_6Mo_7O_{24}$, and its formation in aqueous medium. Raluca Ripan and A. Duca. *Acad. rep. populare Romîne, Bul. științ. Secț. științe teh. și chim.* 4, 379-407(1952).—The stability of $Mo_7O_{24}^{6-}$ was shown by reactions with KOH, $Ba(NO_3)_2$, and HNO_3 to form, resp., $K_6Mo_7O_{24}$, $Ba_3Mo_7O_{24}$, and $H_6Mo_7O_{24}$. Excess of the reagent produces compds. of the type $M^{I}_{6}MoO_{6}$. On standing, solns. of H_6MoO_6 are converted first to $H_6[MoO_3(MoO_4)_3]$, then to $H_6[MoO_2(MoO_4)_4]$ and $H_6[MoO(MoO_4)_5]$, and finally to $H_6[Mo(MoO_4)_6]$. It is concluded that the acid has the structure $H_6[Mo(MoO_4)_6]$, and the NH_4 salt, $(NH_4)_6[Mo(MoO_4)_6]$. The conductometric titration shows that 2H undergo "unique dissocn." (*C.A.* 41, 3007g); the structures are represented by $\overset{H_2}{H_4}[MoO_6]$ and $\overset{H_2}{H_4}[Mo(MoO_4)_6]$. This study establishes the conditions under which the formation of mixts. of salts can be prevented, so as to enable precise detn. of molybdic acid.

T. Z. Dénessy

Chem

RIPAN, R.

"Physicochemical study of the constitution of hetropolyacids. Note 5.. The phospho-12 wolframicacid. p. 215. BUFETIN STIINTIFIC. VOl.4, no. 2, Feb. 1953. Bucuresti Rumania.

SO: Monthly List of East European Accesssions, L.C.Vol. 2, No.11, Nov. 1953, Uncl.

PIRU, Raluca

"L'etude de la condensation de MoO_4Na_2 sous l'action de l'acide azoteux par la methode conductometrique." Revue de Chemie, Vol. 2, 1954, Bucharest.

RIPAN, Raluca

"L'etude physico-chimique des heteropolyacides. L'acide bor-12-wolframique." Revue de Chemie, Vol. 2, 1954, Bucharest.

Ripan, Raluca

5

The physical chemistry of heteropoly acids. 12-Tungstoboric acid. Raluca Ripan and Candin Liteanu. *Rev. chim.* (Acad. rép. populaire Roumaine) 2, 37-46(1951)(in French); cf. *C.A.* 45, 8325*h*.—Aq. solns. of $H_5[B(W_2O_7)_6]$ were studied by measuring the variation of pH with the concn. and by neutralization of the heteropoly acid and urotropine and pyridine salts of the heteropoly acid with NaOH; parallel pH and neutralization runs with HCl were conducted at the same time. The data were interpreted to show that $H_5[B(W_2O_7)_6]$ dissocs. into $5H_3O^+$ and a complex anion $BW_{12}O_{40}^{5-}$. This acid thus conforms to the Miolati-Rosenheim theory. Richard N. Rhoda

2

RIPAN, R.

Achievements and tasks in the field of chemistry.

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Vol. 4, no. 2, 1955
ANALELE
Bucuresti

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 5, no. 12
December 1956

27 27 2 5

Concentrated solutions of boric acid and phosphoric acids. Raluca Ripan and Candin Liteanu (Acad. Rép. Populaire Roumaine, Filiale de Cluj). *Rev. chim., Acad. rép. populaire Roumaine* 1, 21-31(1956)(in French).—If the formation of mols. such as $H_2B_4O_7$ occurs in concd. solns. of boric acid, an increase in $[H^+]$ would be expected when a concd. soln. of pH = 6 is dild. Both the dissocn. const. of H_3BO_3 and the $[H^+]$ increase with increasing concn. This fact is explained by the formation of a strong acid, H_5BO_4, according to the following equil. $H_3BO_3 + 3H_2O \rightleftharpoons H_5BO_4$. Evidence for the occurrence of this acid is given. The ratio of H_5BO_4 to H_3BO_3 at various concns. was calcd. on the assumption that $H_5BO_4 \rightleftharpoons 5H^+ + H_4BO_4^{5-}$. Phosphoric and arsenic acids also behave in this manner forming H_5PO_5 and H_5AsO_5.
Mary L. McFadden

Chem

RIPAN, R.

2

Chem

The preparation and structure of periodic acids. R. Ripan and A. Duca. *Rev. chim., Acad. rep. populaire Roumaine* 1, No. 1, 39-54(1956)(in German).—H_5IO_6 was prepd. by the addn. of HIO_4 to H_2O and titrated conductometrically with KOH, guanidine carbonate, and $AgNO_3$ to show breaks at 1 and 5 equiv. H atoms. Heating KIO_4 transformed it into $K_2H_2(I_2O_9)$ which when titrated with KOH showed two equiv. H atoms but with $AgNO_3$ showed the quadrivalent $(I_2O_9)^{4-}$ ion. Treating H_5IO_6 with HIO_4 also led to $H_4I_2O_9$ whereas the reaction of $Na_3H_2IO_6$ and CO_2 gave $NaIO_4$; H_5IO_6 with CO_2 gave HIO_4. $H_4I_2O_9$ was prepd. by pptg. the Ba compd. with H_2SO_4 to give the free acid which then titrated with KOH gave breaks at 1 and 6 equiv. H atoms whereas with $AgNO_3$ gave a break at 4 H atoms at the formation of $Ag_4I_2O_9$. The reaction of normal H_5IO_6 soln. with CO_2, followed by drying to remove the CO_2 and diln. to 0.01*N* led to $H_8I_2O_{11}$ which was titrated with KOH to show breaks at 2 and 10 equiv. due to formation of 2 KH_4IO_6 and its subsequent reaction with 8 KOH to give K_5IO_6, whereas with $AgNO_3$ only a break at 10 equiv. was found indicating $2Ag_5IO_6$. From this work it is concluded that H_5IO_6 is a heteropolyacid but $H_4I_2O_9$ and $H_8I_2O_{11}$ are isopolyacids and form $(IO_6)^{5-}$ by replacement of an O atom by $(IO_4)^-$. A. Leffler

RIPAN,R; MARCU,G; PASCU,N; Finding of products rich in tellurium in the nonferrous metal industry and recovery of tellurium. p.7

Vol.4 No.1/2, Jan-June 56 Bucharest

So: Monthly list of East European Accessions (EEAL), LC, Vol5 No.10, Oct 56

Distr? 4E4j

3

Physical and chemical study of the formation of molybdenum phosphates in aqueous solutions. R. Ripan and I. Zsakó. *Acad. rep. populare Romîne, Filiala Cluj, Studii cercetări chim.* 7, No. 1-4, 23-43(1956).—The following ternary systems were studied by conductometric, potentiometric, and photometric procedures: NaH_2PO_4–$(NH_4)_6Mo_7O_{24}$–H_2O; H_3PO_4–$(NH_4)_6Mo_7O_{24}$–H_2O; H_3PO_4—molybdic acid–H_2O. Heteropoly ions having Mo/P ratios of (1, 1.5, 2.5, 4, and 9) were formed in the 1st and 2nd systems, and of 1, 2, 9, 11, and 12 in the 3rd system. The ion having a Mo/P ratio of 1 is present at pH 2.3-4.0 and the ion having a Mo/P ratio of 9 is formed in solns. where [Mo] <0.5*M*. The soly. of Na phosphomolybdate is higher than that of the corresponding ammonium salt, and the soly. of the latter decreases with increase in the number of Mo atoms. The intensity of the yellow color of phosphomolybdate increases with the degree of condensation, and the stability of the heteropoly ions increases with increase in acidity. R. M.

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27

The behavior of pyrophosphoric acid in aqueous solutions. R. Ripan and I. Zsakó. *Acad. rep. populare Romîne, Filiala Cluj, Studii cercetări chim.* 7, No. 1-4, 45-52(1956).—From pH and hydrolysis-rate measurements, it was found that, unlike concd. solns. of orthophosphoric acid, no abnormal acidity is found when solns. of 0.25-3.0*M* pyrophosphoric acid were used. Measurements, performed in a *N* H_2SO_4 soln. at room temp., showed that the hydrolysis rate of molybdopyrophosphoric acid is much greater than that of pyrophosphoric acid. The hydrolysis of molybdopyrophosphoric and pyrophosphoric acids is a first-order reaction. The hydrolysis rate const. of pyrophosphoric acid is $4.80 \times 10^{-}$[illegible]/sec. and for molybdopyrophosphoric acid $1.31 \times 10^{-}$[illegible]/sec. Thus, it was proved that the presence of Mo groups within the coördination sphere of P atoms in pyrophosphoric acid results in an instability of the P-O-P bonds.

R. Mavrodineanu

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Distr: 4E4j

Ripan Raluca, Virf, L.

RUMANIA/Analytical Chemistry - Analysis of Inorganic Substances. E-2

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 24836

Author : Ripan Raluca, Virf, L.
Inst : --
Title : New Method of Gravimetric Determination of Bismuth and Its Utilization in the Analysis of Pharmaceutical Preparations.

Orig Pub : Farmacia (Romin.), 1957, 5, No 5, 393-397

Abstract : On addition of pyridine (to pH 5-6) to a warm solution of K BiI (formed on interaction of Bi and KI) the unstable, colored Bi complexes which are formed at first, undergo hydrolysis and Bi separates quantitatively in the form of BiOI precipitate of red-brown color, which is suitable for gravimetric determination of Bi. The sample being analyzed, containing 0.04-0.06 g Bi, is dissolved in concentrated HNO , diluted with water to 150 ml, heated at

Card 1/2

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Ripan, R.

Analysis of light alloys. III. Quick gravimetric methods for the separation of aluminum from magnesium and manganese. R. Ripan and I. Pirvu. *Bul. Univ. "V. Babes" și "Bolyai" Cluj Ser. Științ. nat.* **1**, 109-17(1957); cf. *CA* **45**, 8939*f*; **50**, 11160*i*.—Methods are given for the pptn. of Al in light alloys with benzoic acid, thus sepg. Mn and Mg. The pH in both cases should not be higher than 4-5. This pptn. gives a cryst. ppt. which does not absorb other ions and which is easy to filter and wash. The ppt. can be weighed after drying or ignited on an ordinary gas flame. About 0.04 g. Al can be detd. with an error of <0.3%, and the quantities of Mg or Mn found after the sepn. of Al were about 99.9%. C. Heitner-~~Wirguin~~

RIPAN, RALUCA

RUMANIA/Inorganic Chemistry - Complex Compounds. C.

Abs Jour : Ref Zhur - Khimiya, No 10, 1958, 31968

Author : Raluca Ripan, Gheorghe Marcu

Inst : Academy of Sciences of Rumania,

Title : Study of Inorganic Compound Structure with Radioactive Isotopes, I. Structure Study of Hexametaphosphates With Sr^{90}.

Orig Pub : Commun. Acad. RPR, 1957, 7, No 3, 323-327

Abstract : Sr hexametaphosphate was prepared for the determination of hexametaphosphate structure. The activity distribution was investigated by synthesis followed by analysis, and it was found that about 4% of the total activity appeared in $SrSO_4$ obtained by dissolving hexametaphosphate in HCl and treating it with Na_2SO_4. This activity

Card 1/2

RUMANIA/Inorganic Chemistry - Complex Compounds. C.

Abs Jour : Ref Zhur - Khimiya, No 10, 1958, 31968

distribution indicates that the strontium atoms produce bonds in the compound under study in a different way.

Card 2/2

RUMANIA/Chemical Technology. Chemical Products and Their
Application. Elements. Oxides. Mineral Acids.
Bases. Salts.

Abs Jour: Ref Zhur-Khim., No 2, 1959, 5246.

hot water, after which the solution is heated to 80° and a small excess of 12% NH_4OH is added to it (with stirring for 2-3 hours). The solution is filtered, and the precipitate is washed with 5% solution of NH_4OH until SO_4^{2-} is eliminated completely. The filtrate together with the wash water is evaporated. The precipitate is boiled with 45% NaOH solution (55 ml per every 70 g of the product). Having boiled it for 15-20 min, a flow of air is passed through for 2 hours under continuous stirring in a water bath in the presence of catalysts CuO and $CuSO_4$ in order to oxidize As^{3+} into As^{5+}. The precipitate is filtered off and washed with water. The filtrate is treated (under stirring) with

Card : 2/3

RIPAN, R.

✓ Physicochemical study of the formation of the molybdo-
pyrophosphates in aqueous solutions. R. Ripan and I.
Zsakó. *Acad. rep. populare Romîne, Filiala Cluj, Studii
cercetări chim.* 8, No. 1-2, 7-19(1957).—The following
systems were studied by conductometric, colorimetric, and
potentiometric methods: $H_4P_2O_7$–$(NH_4)_6Mo_7O_{24}$–H_2O (I)
and $H_4P_2O_7$–molybdic acid–H_2O (II). The exptl. methods
used were described earlier (cf. preceding abstr.). The
hydrolysis of pyrophosphoric acid to give orthophosphoric
acid was taken into account. The rate of hydrolysis in-
creases in the presence of molybdates. By making the
physicochem. measurements immediately after prepn. of
the soln. it was possible to reduce hydrolysis to less than 1%.
In I 1-, 3-, and 5-molybdopyrophosphate ions exist, whereas
in II, 1-, 4-, 6-, 12-, and 18-molybdopyrophosphates occur.
Six of these 7 complex ions were not known previously and
only the 12-molybdopyrophosphate is known in salt form
in the solid state. Colorimetric studies show that the
intensity of the yellow color of the molybdopyrophosphates
increases with increasing degree of condensation, except
for 18-molybdopyrophosphoric acid which has an intensity
similar to the 12 acid. The extinction of the solns. in II
when the ratio Mo/$P_2O_7^{4-}$ is between 6 and 18 is anomalous
in that the extinction max. is displaced. When the ratio
reaches 18/1, an inflection in the curve is observed and
pptn. occurs. This phenomenon is not caused by hydrolysis
of the pyrophosphoric acid but seems to be due to an intra-
[illegible] transformation. A. Berlin

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— RIPAN, R.

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RUMANIA / Physical Chemistry. Solutions. Theory of Acids and Bases.

Abs Jour : Ref Zhur - Khimiya, No 12, 1959, No. 41711

Author : Ripan, Raluca; Marcu, Cheorghe

Inst : Rumanian AS, Iasi Affiliate

Title : Determination of the Solubility of Dipyridine Zinc Halides and of Dipyridine Zinc Thiocyanide by means of Radioactive Zn-65

Orig Pub : Studii si cercetan stunt. Acad. RPR Fil. Iasi. chim, 1957, 8, No 1, 27-31

Abstract : Solubility and solubilization (S) of $(ZnPy_2)Cl_2$(I), $(ZnPy_2)Br_2$(II), $(ZnPy_2)_2I_2$ III and $(ZnPy_2)\cdot(SCN)_2$(IV) were determined by means of Zn^{65}. It was established that the solubility in moles/l and S of I, II,

Card 1/2

RUMANIA / Inorganic Chemistry. Complex Compounds. C

Abs Jour: Ref Zhur-Khimiya, No 8, 1959, 20742.

Author : Ripan, R. and Szekely, Z.
Inst : Rumanian Academy of Sciences?
Title : Investigation of the Formation of Isopoly Acids in Aqueous Solutions by Index of Refraction Measurements.

Orig Pub: Studii si Cercetari Chim Acad RPR, Fil Cluj, 8, No 3-4, 187-197 (1957) (in Rumanian with French and Russian summaries).

Abstract: The refractometric and interferometric methods were used in measuring the index of refraction n of aqueous solutions of Na_2MoO_4 and Na_2WO_4 on the reaction with HNO_3. Breaks in the curves giving the dependence of n on the concentration are taken as

Card 1/3

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RUMANIA / Inorganic Chemistry. Complex Compounds. C

Abs Jour: Ref Zhur-Khimiya, No 8, 1959, 26742.

Abstract: evidence for the formation in the solutions of isopolymolybdates (I) and isopolytungstenates (II). In the case of I, the condensation of the MoO_4^{2-} radicals under the action of H^+ ions proceeds according to the scheme $Na_2O \cdot MoO_3 \xrightarrow{H^+} (Na_2O \cdot 3MoO_3)$ $(2Na_2O \cdot 3MoO_3) \xrightarrow{H^+} 5Na_2O \cdot 12MoO_3 \xrightarrow{H^+} 3Na_2O \cdot 12MoO_3$ $\xrightarrow{H^+} MoO_3 \cdot xH_2O$. The authors have found that an equilibrium between these forms is established in solution, each form existing at a specified H^+ concentration. At a H^+: Mo ratio of 1.5, the polymeric molecules decompose with the production of MoO_3xH_2O. In the case of II, the condensation proceeds according to the scheme $Na_2O \cdot WO_3 \xrightarrow{H^+} 5Na_2O \cdot 12WO_3 \xrightarrow{H^+}$ $4Na_2O \cdot 12WO_3 \xrightarrow{H^+} 3Na_2O \cdot 12WO_3 \xrightarrow{H^+} WO_3xH_2O$. The compound $4Na_2O \cdot 12WO_3$ is completely destroyed after

Card 2/3

RUMANIA / Inorganic Chemistry. Complex Compounds. C

Abs Jour: Ref Zhur-Khimiya, No 8, 1959, 26742.

Abstract: days. The condensation of the radicals also proceeds in the presence of other electrolytes, e.g., $NaNO_3$. It is shown that the n of an aqueous solution of I changes with time, whereas no change is observed in the case of II. The action of HNO_3 on K_2XrO_4 gives only $K_2Cr_2O_7$.

Card 3/3

RIPAN, R.

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Use of paper chromatography (in electrolyte solutions and in water) for study of the structure and reaction mechanisms of heteropoly acids. I. Phospho- and silicomolybdic acid. R. Ripan, A. Duca, R. Paisni, D. Stănescu, and A. Mager (Inst. chim. acad. RPR, Cluj, Romania). *Naturwissenschaften* 44, 421-2(1957).—Paper chromatography in electrolyte media is a useful tool for the study of the structure, stability, valence, pH dependence, and rate of change of heteropoly acids. E. M. Loebl

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RIPAN, R

Application of paper chromatography (in electrolytes and in water) to the study of the structure and of the reaction mechanisms of heteropoly compounds. I. Formation of phospho- and silicomolybdic acids of the saturated type (1 R: 12 Mo). R. Ripan, A. Duca, R. Paladi, D. Stănescu, and A. Mager (Inst. Chem., Cluj, Romania). *Bull. soc. chim. France* 1958, 1607-13.—The behavior of different condensed molybdates derived from Na_2MoO_4 (pH 8.6-0.2) was examd. As a comparison CrO_4^{--}, $Cr_2O_7^{--}$, and $(NH_4)_6(Mo_7O_{24})$ of known structure were studied. Also the formation of heteropoly compds. was studied, the at. ratios of which were 1R: 1Mo to 1R: 12Mo (R = B, Si, P, etc.), and each ratio for the pH range 8.5-0.2. Paper chromatography in the presence of electrolytes and in water enables the sepn. of different condensed forms according to their stability; for instance, dodecamolybdate (predominant at pH 1.25) is more stable than hexamolybdate (predominant at pH 3.8), and silicomolybdic acid (predominant at pH 1.7) is more stable than phosphomolybdic acid (predominant at pH 1.7). Qual. and quant. interpretations of the chromatograms show that for the formation of heteropoly compds. having fewer than 12Mo/R at least the hexamolybdate is needed. The formation of heteropoly acids (1R: 12Mo) occurs between the isopolymolybdic groups (Mo_6 or Mo_{12}) and the radical RO_4 (SiO_4 or PO_4). H bridges are probably important for the formation of heteropoly acids. II. Study of the decomposition and stability of molybdic, phosphomolybdic, and silicomolybdic acids. *Ibid.* 1614-23.—Decompn. of isopolymolybdic acid, and of phospho- and silicomolybdic acids was made with KOH and $Ba(OH)_2$. The ppts. were formed immediately with $Ba(OH)_2$, and after some standing with KOH. Analytical data and chromatograms obtained indicate that the degree of condensation of Mo may be Mo_{12} in silicomolybdic acid and Mo_6 in phosphomolybdic acid. The decompn. steps seem to be: $Mo_{12} \rightleftharpoons Mo_6 \rightleftharpoons Mo_4 \rightleftharpoons Mo_2 \Rightarrow Mo$. Heteropoly acids previously synthesized (P-12Mo and Si-12Mo) are more stable than those obtained by mixt. of components. Chromatography reveals that phospho- and silicomolybdic acids are most stable at approx. pH 1.7 for the same concn. of Mo. J. L. Boulayko

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RIPAN, R.

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A study of some inorganic complexes using radioactive isotopes. R. Ripan and Gh. Marcu. *Rev. chim., Acad. rép. populaire Roumaine* 3, 5-12(1958)(in French).—Exchange between Zn^{65} ion and $[Zn(py)_2]Cl_2$ (I); $[Zn(py)_2]Br_2$ (II); $[Zn(py)_2]I_2$ (III); and $[Zn(py)_2](SCN)_2$ (IV) (py = pyridine) was measured at 1, 24, and 360 hrs. Results are, in the above order, for I, 2.09, 3.04, and 8.38% exchange; for II 3.24, 3.35, and 10.13%; for III, 0.98, 1.20, and 6.83%; and for IV, 1.39, 2.06, and 9.84%. No rate consts. or mechanisms are given and no conclusions drawn. Soly. products were detd. as I 4.23×10^{-4}, II 2.14×10^{-4}, III, 3.64×10^{-7}, IV 8.99×10^{-4}. Exchange takes place at two very different rates between Sr^{++} and the two types of Sr in $Sr[Sr_2(PO_4)_4]$. Approx. 16 to 19% of the Sr was readily exchangeable. It is concluded that only atoms at the surface of the complex participate in exchange.

W. Alexander Van Hook

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RUMANIA / Inorganic Chemistry. Complex Compounds. C

Abs Jour: Ref Zhur-Khimiya, No 3, 1959, 7745.

Author : Ripan, Raluca., Marcu, Gheorghe.
Inst : Rumanian Academy.
Title : Study of Structure of Inorganic Compounds by Means of Radioactive Isotopes. II. Study of the Structure of Complex Compounds of Zinc of $(ZnPy_2)X_2$-Type by Means of Radioactive Zinc Zn^{65}.

Orig Pub: Comun. Acad. RPR, 1958, 8, No 3, 269-273.

Abstract: Study of isotope exchange between compounds of the type $(ZnPy_2)X_2$ where $X = Cl^-$, Br^-, I^-, SCN^-, and Zn^{65} ions in homogeneous medium. It was found that very slow isotope exchange is taking place between them. This indicates stability of these compounds even in very diluted aqueous sol-

Card 1/2

E-2

COUNTRY : Rumania
CATEGORY : Analytical Chemistry.

ABS. JOUR. : RZKhim., No. 7, 1959, No. 23091

AUTHOR : Ripan, R.; Marcu, G.; Pascu, N.
INST. : Rumanian Academy
TITLE : New Rapid Method for Determination of Tellurium

ORIG. PUB. : Comun. Acad. RPR, 1958, 8, No 5, 467-471

ABSTRACT : A method has been worked out for determining Te(4+), which is based on its reduction with thiosemicarbazide (I) in hydrochloric acid medium, to elemental Te. The concurrently liberated S is dissolved by treatment with CS_2 and C_2H_5CH. The results obtained are somewhat too high (on the average by 3.63%) due to the formation of a certain amount of TeS; to eliminate errors induced by the formation of TeS a correction factor is used which is 0.99498. On determining Te, there are added to the solution being analyzed, containing ~0.1 g Te, 10 ml 36.6% HCl, 50 ml of a mixture (1:1) of CS_2 and C_2H_5CH, 10 ml water, and 10 ml of 2% solution of I. The solution, with the

CARD: 1/2

Ripan, R.

C

RUMANIA / Inorganic Chemistry. Complex Compounds.

Abs Jour : Ref Zhur - Khimiya, No 14, 1959, No. 49000

Author : Ripan, R. and Marcu, G.
Inst : Rumanian Academy of Sciences
Title : Investigation of the Structure of Inorganic Compounds by the Use of Radioactive Isotopes. III. Investigation of Isotope-Exchange in *

Orig Pub : Comun Acad RPR, 8, No 7, 655-658 (1958)

Abstract : The authors have investigated isotope exchange in homogeneous medium between strontium hexametaphosphate and Sr^{2+} ions. It has been found that in the case of $Sr[Sr_2^{90}(PO_3)_6] + Sr^{2+}$

*Homogeneous Medium Between Strontium Hexametaphosphate and Strontium Ions Using Radioactive Sr 90

Card 1/2

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Condensation of sodium tungstate in aqueous solution by strong acids. R. Ripan and M. Puşcaşiu. *Acad. rep. populare Romîne, Filiala Cluj, Studii cercetări chim.* 9, 7-17(1958).—Conductometric and potentiometric methods indicate two stable equil. in the condensation of sodium tungstate by strong acids. One occurs at the ratio 6W:7H$^+$ (pH = 6.3), corresponding to $[HW_6O_{21}]^{5-}$, and the other at 6W:9H$^+$ (pH = 3.3), corresponding to $[H_3W_6O_{21}]^{---}$. The latter is stable also in dil. soln., and both forms are unstable in alk. soln. The 2 condensed forms resist double-exchange reactions, showing that the equil. are stable and well defined.

C. Heitner-Wirguin

RUMANIA/Physical Chemistry - Solution. Theory of Acids and Bases. B

Abs Jour : Ref Zhur Khimiya, No 19, 1959, 67354

Author : Ripan, R., Duca, A., Calu, Cleopatra.

Inst : Rumanian Academy , Cluj Affiliate

Title : Investigation of Concentrated Molybdenum Acids.

Orig Pub : Studii si cercetari chim. Acad. RPR Fil. Cluj, 1958, 9, No 1-4, 19-36

Abstract : This investigation was carried out in order to determine the maximum degree of condensation of molybdenum acid molecules as a function of concentration and solution pH by conductometric, potentiometric, gravimetric, and chromatographic methods. It was established that as the solution concentration increases, the degree of condensation, the stability of the internal sphere of molybdenum acid complexes, and the degree of dissociation of

Card 1/2

RUMANIA/Physical Chemistry - Solutions. Theory of Acids and Bases. B

Abs Jour : Ref Zhur Khimiya, No 19, 1959, 67354

external H/ ions increases up to a specific value. Depending on the solution concentration and pH the $H_6Mo_6O_{21}$ molecule may polymerize:

$2H_6Mo_6O_{21} \rightleftarrows H_{12}Mo_{12}O_{42}$. -- R. Mocharnyuk

Card 2/2

Formation of oxalatomolybdates in aqueous solutions. I. R. Ripan, A. Duca, and I. Ceteanu. *Acad. rep. populare ~~Romîne~~, Filiala Cluj, Studii cercetări chim.* 9, 47–65(1958).—The reactions occurring in solns. of molybdic acids to which oxalate ions may be added were studied. The following molybdates were used: Na_2MoO_4, $(NH_4)_2Mo_2O_7$, $H_6[Mo_5O_{18}]$, and $(NH_4)_6[Mo_7O_{24}]$. The effect on the system ($1MoO_4^{--}:6C_2O_4^{--}$) by treatment with NH_4OH, $AgNO_3$, and $Pb(NO_3)_2$, the influence of oxalic acid on molybdates, and the elec. charge of the complex radical obtained (ratios $1MoO_4^{--}$: 1–30 $C_2O_4^{--}$) were studied conductometrically. Other methods used were chromatography, electrochromatography, and polarography. The conductometric results show that with every kind of molybdate studied, the ratios obtained on the curves are reproducible at $1MoO_4^{--}$:1,2,4, and $6C_2O_4^{--}$. The reactions between molybdate and oxalic acid occur step by step (up to the raio $1MoO_4^{--}:6C_2O_4^{--}$), thus proving them to be reactions of substitution. The conductometric study enables the detn. of the degree of condensation of the isopolymolybdate from the curves obtained. From the paper chromatographic and polarographic study, it is possible to conclude that the major action of oxalic acid on the molybdates is the formation of a complex and not condensation. Electrochromatography showed the charge of the oxalatomolybdic complexes to be negative. The following equil. exist in aq. solns.: $(X_2MoO_4.6H_2C_2O_4) \underset{+2H_2O}{\overset{-2H_2O}{\rightleftharpoons}} X_2[MoO_3(C_2O_4)_2] + 4H_2C_2O_4$, $X_2[MoO_3(C_2O_4)_2] \underset{-H_2O}{\overset{+H_2O}{\rightleftharpoons}} X_2[MoO_3(C_2O_4)] + H_2C_2O_4$.

C. Heltner-Wirguin

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RUMANIA/Inorganic Chemistry - Complex Compounds. C

Abs Jour : Ref Zhur Khimiya, No 19, 1959, 67499

Author : Ripan, R; Duca, A., Cetanu, I.

Inst : Rumanian Academy, Cluj Affiliate

Title : Study of the Formation of Oxalo-Molybdates in Aqueous Solutions.

Orig Pub : Studii sicercetari chim. Acad. RPR Fil. Cluj., 1958, 9, No 1-4, 47-65

Abstract : The interaction in aqueous solutions of molybdates (Na_2MoO_4, $(NH_4)_2Mo_2O_7$, $H_6[Mo_5O_{18}]$ and $(NH_4)_6[Mo_7O_{24}]$) and oxalates was studied by conductometric, chromatographic, electrochromatographic, and polarographic methods. The formation of complex oxalo-molybdates was established. -- Author's summary

Card 1/1

RIPAN, R.; MARCU, GH.

Study of the structure of inorganic combinations by means of radioisotopes. In French. p. 5.

REVUE DE CHIMIE. JOURNAL OF CHEMISTRY. (Academia Republicii Populare Romine) Bucuresti, Rumania. Vol. 3, no. 1, 1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 7, July 1959.

Uncl.

RIPAN, R., and others

Sodium hexametaphosphate, and its reaction in quantitative analysis. In French. p. 13.

REVUE DE CHIMIE. JOURNAL OF CHEMISTRY. (Academia Republicii Populare Romine) Bucuresti, Romania. Vol. 3, no. 1, 1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 7, July 1959.

Uncl.

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Country : HUNGARY
Category : Inorganic Chemistry. Complex Compounds

Abs. Jour. : Ref Zhur-Khim, 1959, No 5, 14022

Author : Ripan, R.; Pristavu, C.
Institut. : Hungarian Academy of Sciences
Title : Physicochemical Study of the Aqueous Solution of Metatungstic Acid $H_{10}[H_2(W_2O_7)_6]$

Orig. Pub. : Acta chim. Acad. scient. hung., 1958, 16, No 1, 83-90

Abstract : By conductometric titration of metatungstic acid (MTA) with solutions of NaOH, NH_4OH, $NaHCO_3$, guanidine, salts of Ba, Pb and Tl, it was established that MTA corresponds in phenol solution to $H_{10}[H_2(W_2O_7)_6]\cdot xH_2O$. MTA is a strong hexabasic acid. The last 4 atoms of H in the outer range of MTA are characterized by considerably lower constants of ionization. In the process of neutralization, ions of pyrotungstic acid are formed from MTA.-- B. Kaplan

Card: 1/1

C-7

RIPAN, R.

5(0) SOV/64-59-4-1/27

AUTHOR: Zhavoronkov, N. M., Deputy Chairman of the Organization Committee of the VIIIth Mendeleyev Congress, Corresponding Member of the AS USSR

TITLE: VIII. Mendeleyev Congress of General and Applied Chemistry (VIII. Mendeleyevskiy s"yezd po obshchey i prikladnoy khimii)

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 4, pp 1-10 (USSR)

ABSTRACT: From March 16 to 23, 1959, the eighth traditional congress of Russian chemists took place in Moscow. The congress was organized by the Academy of Sciences of the USSR, by the Vsesoyuznoye khimicheskoye obshchestvo imeni D. I. Mendeleyeva (All-Union Chemical Society imeni D. I. Mendeleyev), the Gosudarstvennyy komitet Soveta Ministrov SSSR po khimii (State Committee of the Council of Ministers of the USSR of Chemistry) and by the Ministerstvo vysshego obrazovaniya SSSR (Ministry of Higher Education of the USSR).

[illegible] In the first plenary meeting a contribution of the Chairman of the State Committee of the Council of Ministers of the USSR of Chemistry V. S.

Card 2/6

Fedorov was given about the "Problems of Scientific Technical Progress of the Chemical Industry" and by the Academician V. A. Kargin on the "Fundamental Problems of the Polymer Chemistry". In the plenary meetings the following contributions were given: Academician A. N. Nesmeyanov "The Periodic System of the Elements of D. I. Mendeleyev and Organic Chemistry", Academician N. N. Semenov - " Fundamental Problems of Chemical Kinetics", Academician V. I. Spitsyn -"Modern State of the Periodic System of D. I. Mendeleyev", Academician A. P. Vinogradov - "Fundamental Problems of Radiochemistry", Academician V. A. Engel'gardt - "Fundamental Problems of Biochemistry", Professor A. I. Sokolov - "Chemical Problems of the Agriculture of the USSR", Director of the Nauchno-issledovatel'skiy institut khimicheskogo mashinostroyeniya (Scientific Research Institute of Chemical Machine Construction) V. V. Nikolayev - "Main Problems of the Chemical Apparatus and Machine Construction", Corresponding Member of the AS USSR Ya. K. Syrkin - "Present State of the Problem of Valence" and Academician A. P. Aleksandrov - "Chemical Aspects in the Application of Atomic Energy".

[illegible] Liu Ta-kang, Director of the Institute of Chemistry of the Academy of Sciences of the Chinese People's Republic - "State of the Studies on Rare Elements in the Chinese People's Republic", K. Nenitzescu, Rumanian scientist, Academician - "Separation of the Complex of Cyclobutadiene With Silver Nitrate", Academician I. Murgulescu -"Kinetics of the Dehydration of the Crystal Hydrates", and Academician R. Ripan - "Investigation of the Structure of Some Inorganic Compounds by Means of Radioactive Isotopes", Academician Geza Shay, President of the Hungarian Chemical Society - "Quantitative Ratio in Frontal Gas Chromatography", K. K. Ingold, Professor of the London University - "Nitration With Respect to Nitrogen and Oxygen", R. P. Bell, President of the Faraday Society and Professor at Oxford University - "The

Card 4/6

Tunnel Effect in Reactions With the Action of Hydrogen Isotopes" Ch. K. Ingol'd made a lecture in Leningrad on the theme "Studies of the Kinetics of the Nitration Process",

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RIPAN, R.

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Study of the structure of inorganic compounds with the help of radioactive isotopes. IV. A radio-chromatographic study of the condensation of Na_2WO_4 by HNO_3. R. Ripan and G. Marcu. *Acad. rep. populare Romîne, Filiala Cluj, Studii cercetări chim.* 10, 17–26(1959); cf. *C.A.* 53, 21073*f*.—H_2WO_4 (or Na_2WO_4) in H_2O soln. is condensed by strong acids to the isopoly acid ions $(HW_6O_{21}.aq.)^{5-}$ (hexatungstate) and $(H_3W_6O_{21}.aq.)^{---}$ (I) (paratungstate). The degree of condensation of Na_2WO_4 in relation to pH, concn., temp., and time is detd. An ascending paper chromatographic method with W^{185} as a radioactive indicator is used. A satd. NaCl soln. is used because it permits the migration of the uncondensed ions, whereas the condensed ions remain at the start. The radioactivity is measured with a Geiger-Müller type MST-17 counter every 0.5 cm. along the chromatographic strip and the percent condensation is detd. It appears that pH, concn., temp., and time are important factors in the formation of isopoly compds. The chromatographic strips are developed with a soln. of KSCN and $SnCl_2$. Perfect agreement between these and the previous results is observed: Previous investigations, the methods used, and the conclusions are given. 28 references. V. A radio-chromatographic study of the behavior of sodium paratungstate prepared in warm solutions. R. Ripan, G. Marcu, and V. Neagu. *Ibid.* 27–30.—A radio-chromatographic study shows that freshly prepd. $Na_5HW_6O_{21}.aq.$ (I) soln. decomps. on heating: $3Na_5HW_6O_{21}.aq. \rightarrow 6Na_2W_2O_7 + Na_3H_3W_6O_{21}.aq.$ (ψ-metatungstate). I was prepd. by acidifying *N* Na_2WO_4 with *N* HCl at 70° using litmus as indicator. A satd. aq. soln. of recrystd. I was studied chromatographically by the technique described in part IV. Pyrotungstate migrates to the upper part of the paper and ψ-metatungstate remains in the lower part. Chromatography of I prepd. from Na_2WO_4 contg. W^{185} shows twice as much W^{185} in the upper part of the paper as in the lower portion. Results are similar to those of Knorre [*J. prakt. Chem.* 27, 49(1883)] but differ from those of Souchay (*C.A.* 46, 9450*f*) and of Jander and Krüerke (*C.A.* 46, 3440*f*).

A. Gottlich

Ripan, R.

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Distr: 4E3b

The cobalt(III)-amine derivatives of periodic acid. I. The monoacidopentammine-cobalt(III)-periodates. R. Ripan and Cs. Várhelyi. *Acad. rep. populare Romîne, Filiala Cluj, Studii cercetări chim.* 10, 43-50(1959).—The syntheses, analyses, and chem. properties of the following new complex Co periodates are given: $[Co(NH_3)_5Cl]H_3IO_6.2H_2O$, $[Co(NH_3)_5Br]H_3IO_6.H_2O$, $[Co(NH_3)_5NO_3]H_3IO_6.H_2O$, $[Co(NH_3)_5NO_2]H_3IO_6.H_2O$, $[Co(NH_3)_5SCN]H_3IO_6.2H_2O$, $[Co(NH_3)_5NO_2](IO_4)_2$, $[Co(NH_3)_5HCOO](IO_4)_2$. The compds. were prepd. by treating a sol. salt of the complex with H_5IO_6 in dil. H_2SO_4. 17 references. **II. The diacido-tetrammine-cobalt(III) periodates.** *Ibid.* 51-7.—The synthesis, properties, and analyses of the following compds. are given: *trans*-$[Co(en)_2Cl_2]IO_4$, *cis*-$[Co(en)_2Cl_2]IO_4$, *trans*-$[Co(en)_2F_2]IO_4$, $[Co(en)_2CO_3]IO_4$, $[Co(en)_2C_2O_4]IO_4$, $[Co(NH_3)_2$(dimethylglyoxime)$]IO_4$, *cis*-$[Co(NH_3)_4(NO_2)_2]IO_4.2H_2O$, *trans*-$[Co(NH_3)_4(NO_2)_2]IO_4.2H_2O$. The compds. were prepd. by the same method as that used in part I of this series.

A. Gottlieb

18W

RIPAN, R.; MIREL, C.

The properties of metal-salts with O,O-diethyl-dithiophosphates. Pt. 4. Rev chimie Roum 9 no.10:569-574 O '64.

1. Department of Inorganic Chemistry of the Institute of Chemistry of the Rumanian Academy, Cluj, 59-65 Donath Street.

RIPAN, R.

3
1

Distr: 4E2b(e)

Studies of the structure of inorganic compounds with
radioactive isotopes. VI. Studies of the stability of phos-
19 photungstic acid (P:12W) and of silicotungstic acid (Si:-
12W) by an electroradiochromatographic method. R.
Ripan and Gh. Marcu. *Acad. rep. populare Romîne, Filiala*
Cluj, Studii cercetări chim. 10, 201–8(1959); cf. *CA* 54,
4231*c*.—Polytungstates were studied by paper chromatogra-
phy in an electrolytic soln. with the aid of radioactive iso-
topes. The condensed mols. were distinguished from the
simple forms by using W^{185}, and the degree of condensation
of Na tungstate under the effect of HNO_3 was detd. in de-
pendence on pH, concn., temp., and time. The method
involves sepn. of the components by utilizing their various
rates of migration under the influence of an elec. field, using
as a carrier a special filter paper which was soaked with an
electrolyte. The cells held 6 strips of Whatman No. 1
paper 20 × 2 cm. which was soaked with 3*M* NaCl soln.
The mixt. was applied 40 mm. from the neg. pole with a
micropipet, and for 1 hr. a current of 0.4 ma. was passed at
3.5 v./cm. After drying, the chromatogram was developed,
sepd. into sectors, and the radioactivity detd. It was found
that phosphotungstic acid (P:12W) is stable in the pH
range 0.0–3.0 and silicotungstic acid (Si:12W) in the pH
range 0.0–6.0. If the acids are synthesized from the com-
ponents in soln., the stability in the range 0.0–2.5 for
P:12W or 0.0–5.5 for Si:12W is slightly lower. VII. The
exchange of isotopes between tungstates and polytungstates.
Ibid. 209–16.—The relations between tungstates and poly-
tungstates were studied with an electroradiochromatographic
method. The rate of exchange of W isotopes between phos-
photungstic acid (P:12W), silicotungstic acid (Si:12W),
and metatungstic acid on the one hand and Na tungstate
solns. which had been acidified to pH 1 with HCl on the
other hand was detd. A method was found for sepg. the
isopoly from the heteropoly acids of W at pH 1 in the pres-
ence of oxalic acid. It is thought that the heteropolyacids
form supercomplex compds. with the isopoly acids and that
these do not migrate on the paper strip, but remain at the
starting point. The exchange of isotopes takes place
rapidly with phosphotungstic acid, slowly with silicotungstic
acid, and not at all with metatungstic acid in the presence of
oxalic acid at pH 1, even after 214 hrs. The rate of isotopic
exchange depends on the stability of the compds. If the
compd. is stable, the rate of exchange is small, and vice versa.
V. Hoffmann

1/1
CAK

SOV/78-4-6-14/44

5(4)

AUTHORS: Ripan, R., Liteanu, S., Popesku, R.

TITLE: Cryometric Investigation of the Neutralization of Silicon-12-tungstic- and Silicon-12-molybdic Acid With Sodium Hydroxide in Melted $Na_2SO_4 \cdot 10H_2O$ (Kriometricheskoye issledovaniye neytralizatsii kremne-12-vol'framovoy i kremne-12-molibdenovoy kislot yedkim natrom v rasplavlennom $Na_2SO_4 \cdot 10H_2O$)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 6, pp 1300-1304 (USSR)

ABSTRACT: Silicon-12-tungstic- and silicon-12-molybdic acid were investigated with 10 n NaOH in melted $Na_2SO_4 \cdot 10H_2O$. Three samples of silicon-12-tungstic acid (Merck-preparations), one sample of silicon-12-molybdic acid (Merck-preparation), and one sample of silicon-12-molybdic acid produced according to the method of Ye. A. Nikitina (Ref 18) were investigated. The behavior of the silicon-12-molybdic acid and that of the silicon-12-tungstic acid in soda lye is almost equal. The cryometric curves show four breaks which correspond to the consumption of 4, 8, 16, and 28 mols NaOH to one mol heteropoly acid. The consumption of 4 mols NaOH corresponds to the neutralization of the heteropoly acid. A consumption of 8 mols NaOH

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SOV/78-4-6-14/44

Cryometric Investigation of the Neutralization of Silicon-12-tungstic- and Silicon-12-molybdic Acid With Sodium Hydroxide in Melted $Na_2SO_4.10H_2O$

leads to the decomposition of the heteropoly acid anion in $6NaHW_2O_7+Na_2H_2SiO_4$, $6NaHMo_2O_7+Na_2H_2SiO_4$, respectively. The results of the neutralization of the silicon-12-molybdic- and silicon-12-tungstic acid by soda lye in Na_2SO_4-melts are given in tables 1 and 3. The decomposition of the heteropoly acid into $12NaHWO_4+Na_4SiO_4$ or $12NaHMoO_4+Na_4SiO_4$ occurs in the case of a consumption of 16 mols NaOH. In the case of a consumption of 28 mols NaOH the heteropoly acid decomposes into $12Na_2WO_4+Na_4SiO_4$, or $12Na_2MoO_4+Na_4SiO_4$ respectively. There are 4 figures, 3 tables, and 18 references, 2 of which are Soviet.

ASSOCIATION: Universitet imeni Viktora Babesha, Kafedra neorganicheskoy i analiticheskoy khimii, Rumyniya (University imeni Viktor Babesh - Chair of Inorganic and Analytical Chemistry of Roumania)

SUBMITTED: November 25, 1958

Card 2/2

RIPAN, Raluca, acad.; CALU, C.

A physicochemical study of the aqueous solutions of the metatungstic acid. Studii cerc chimie Cluj 10 no.2:217-226 '59. (EEAI 9:9)

1. Universitatea "V. Babes" - Cluj, Catedra de chimie anorganica si analitica.
(Solutions) (Water) (Tungstic acids)

S/081/62/000/005/028/112
B149/B101

AUTHORS: Ripan, Raluca, Kiss, Gabriela, Székely, Z.

TITLE: The spectrophotometric determination of hexavalent uranium

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1962, 155, abstract 5D86 (Studii si cercetári chim. Acad. RPR Fil. Cluj, v. 11, no. 2, 1960, 259-266)

TEXT: A spectrophotometric method for the determination of U^{6+} in the form of an orange-colored complex with salicylaldoxime (I) (molar ratio U:I=1:1) has been worked out. The optimum pH is 8.50-9.50. The color intensity increases if the concentration of I is increased up to a 20-fold excess, thereafter becoming stable. The color develops during 20 min remains stable for as long as a day. Maximum light absorption of the complex is at 400 mμ; at this wave length the reagent absorbs a considerable amount of light. Beer's law is satisfied at a U concentration of 10-60 γ/ml and at 400 mμ, also at concentrations of 10-60 γ/ml and 450 mμ (at the latter wave length I does not absorb, but the sensitivity of the determination is somewhat lower). 5 ml of freshly prepared

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S/081/62/000/005/028/112
B149/B101

The spectrophotometric...

$4.2 \cdot 10^{-2}$ M solution of I (34-fold excess), and 7 ml of 0.05 M solution of borax (to ensure pH = 9.18) are added to the neutral or slightly acid solution of U^{6+} (up to 1500 γU). The mixture is diluted with water to 25 ml and examined spectrophotometrically at 400 mμ. An analogous solution of I is used as a blank. Fe^{3+}, V^{5+}, CN^-, CO_3^{2-}, citrates and tartrates interfere with these determinations, whilst the following do not: (in γ/ml, with U content = 50 γ/ml) SO_4^{2-} 6000, Cl^- 3000, F^- and CH_3COO 2000 and Th 300. To prepare the reagent 0.5756 g I are dissolved in 3-4 ml of ethanol heated in water at 80°C, kept warm until I is completely dissolved (without stirring), made up to 100 ml and filtered.
[Abstracter's note: Complete translation.]

Card 2/2

RIPAN, Raluca; EGER, I.; BOJAN, N.

Contributions to the determination of uranium and accompanying elements. Pt.1. Studii cerc chim 13 no.12:873-877 D '64.

1. Institute of Chemistry of the Rumanian Academy, Cluj Branch 59-65 Donath Street.

[illegible]

Contributions to the determination of uranium and its accompanying [illegible]. Rev chimie Roum 9 no.12:829-833 D '6[illegible]

1. Institute of Chemistry of the Rumanian Academy, Cluj Branch, 59-65 Donath Street. Submitted July 26, 19[illegible]

RIPAN, Raluca; MARCU, M.; CORPIS, [illegible].

Contributions to gold dosing in industrial cyanic solutions. Rev chimie Min petr 15 no.11:684-685 N '64.

RIPAN, Raluca, acad.; VARHELYI, Cs.; URMOSI, J.

New amine dimethylglyoxymates of cobalt (III). Pt.8. Studii cerc chimie Cluj 14 no.2:215-226 '63.

1. Chair of Inorganic and Analytical Chemistry, "Babes-Bolyai" University, Cluj.

S/081/62/000/005/030/112
B149/B101

AUTHORS: Ripan, Raluca, Pascu, N., Marcu, G.

TITLE: A new gravimetric method for the determination of selenium

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1962. 158, abstract 5D115 (Studii si cercetări chim. Acad. RPR Fil. Cluj, v. 11, no. 2, 1960, 277-279)

TEXT: The method (published earlier) for the determination of Te by reduction to the elementary state with thiosemicarbazide (I) in an HCl medium (RZhKhim, no. 7, 1959, 23091) has been applied to a gravimetric determination of Se: 58.51 ml of 37 % HCl are added to 20 ml of the solution to be analyzed (appr. 0.2 g Na_2SeO_3), the mixture is heated to 40-45°C and 79 ml of the precipitating solution (10 ml 1 % I + 69 ml water), heated to the same temperature, are then added, drop by drop with constant stirring. The precipitate is filtered through a glass filter G_4, washed with water, ethanol and ether, dried in a vacuum desiccator for 15 min, and weighed. The time needed for the determination is 25-30 min;

Card 1/2

S/081/62/000/005/030/112
B149/B101

A new gravimetric method for the...

the error is ± 0.42 %. The sensitivity of the determination is 7 γ Se in 1 ml solution. Te, Au, Cu, Bi interfere with the analysis. [Abstracter's note: Complete translation.]

KIPAN, B.

R/003/60/011/005/018/023
A125/A025

AUTHOR: None given

TITLE: Meeting of the Chemical Industry

PERIODICAL: Revista de Chimie, 1960, Vol. 11, No. 5, pp. 299 - 302

TEXT: In the meeting on "Radioisotopes in Research and Chemical Industry", III
held on March 7 - 8, 1960, organized by Secția Chimie - Comisia de Radiochimie
(Chemical Section - Radiochemical Commission) led by Dr. G. Ioniță and opened by
lecturer I. Drimuș, President of the Chemical Section, and by Professor, Acade-
mician S. Țițeica, the following papers were read: "Production of Radioactive
Isotopes in Rumania" by C. Chiotan; "Production of Radioactive Iron From Com-
plex Combinations by Szillard-Chalmers Reactions" by C. Chiotan and A. [illegible];
"Gammagraphical Sources Produced at the Institute of Nuclear Physics" by [illegible]
lea, P. Florican and M. Onicescu; "Principles for Planning and Organization of
the Radiochemical Laboratories" by Al. [illegible]; "Protection of the Organism A-
gainst the Noxious Action of Ionizing Radiations with the Aid of [illegible]
Compounds" by Gh. [illegible]; "Decontamination within the Laboratories Operating
With Radioactive Isotopes" by I. [illegible] and D. [illegible]; "Application of Radioac-

Card 1/2

tive Isotopes in Chemical Industry" by G. Ioniță; "Achievements at the I.F.A.
in the Field of the Radiation Chemistry" by [illegible]; "Ionizing Radiation,
Initiator of the Oxidation Reaction of Paraffin" by [illegible]
Drimuș, A. [illegible] and V. [illegible]: "Polymerization and Grafting [illegible]
Under the Influence of Ionizing Radiations" by [illegible]
[illegible]: "Sterilization of Medicines with Gamma Radiation" by [illegible]
an and A. [illegible]: "Synthesis of Medicines by Traced Atoms" by [illegible]
P. Adrian and A. Constantinidi: "Application of Radioactive Isotopes in Chemical
Research" by [illegible]; "Achievements in Radiochemistry at the Chemical Insti-
tute of the Rumanian Academy, Cluj Affiliation and at the Department of Anorgan-
ic Chemistry of the Babeș-Bolyai University" by [illegible], Gh. [illegible] and N. [illegible]; "Reactions
"Tempering Processes in the Szillard-Chalmers Effect" by [illegible]; "Contributions to
of Isotopic Exchanges in Heterogeneous Medium" by [illegible]; "Contributions to
the Study of the Ionic Exchange on Cationic Resins. Utilization of Organic Sol-
vents as Eluant Agents in the Cationic Exchange" by C. [illegible]; "Works
of the Researchers at the I.F.A. With Regard to the Utilization of Radioactive
Isotopes in Analytic Chemistry" by T. [illegible]; "Radiochemical Determinations
in Ferrous Metallurgy" by Gh. Dumitrescu and "Radiometric Measurings in Chemical
Industry" by Gh. Ioniță.

Card 2/2

RIPAN, Raluca
Surname (in caps); Given Names

Country: Rumania

Academic Degrees: Academician

Affiliation: --

Source: Bucharest, Comunicarile Academiei Republicii Populare Romina, No 4, 1961, pp 409-414.

Data:

"A New Radiochemical Method for the Quantitative Determination of Potassium."

Co-authors:

MARCU, Gheorghe, Academician,
COSMA, Minerva, Academician.

RIPAN, R., acad.; DUCA, A.; MAGER, A.

Paper-chromatographic studies on the behavior of the hydrogen ions of silicowolframic acids. Rev chimie 6 no.1:51-56 '61.

1. Institut fur Chemie, Cluj, Akademie der Rumanischen Volksrepublik.
2. Membre du Comite de redaction "Revue de chimie" (for Ripan).

RIPAN, R.; LITEANU, K.; MEACU, V.; POPESKU, L.

Cryometric neutralization of 12-phosphomolybdic acid and 12-phosphotungstic acid with sodium hydroxide. Zhur. neorg. khim. 6 no.1:246-249 '61. (MIRA 14:2)

1. Kluzhskiy universitet im. V.Babesh-Bolyay. Khimicheskiy fakul'tet, kafedra neorganicheskoy i analiticheskoy khimii. (Rumynskaya Narodnaya Respublika).
(Phosphomolybdic acid) (Phosphotungstic acid)
(Sodium hydroxide)

RIPAN, R.; LITEANU, K.; NEAGU, V.

Cryometric neutralization of metatungstic acid and 12-borotungstic acid with sodium hydroxide. Zhur. neorg. khim. 6 no.1:249-251 '61.
(MIRA 14:2)

1. Kluzhskiy universitet im. Babesh-Bolyay. Khimicheskiy fakul'tet, kafedra neorganicheskoy i analiticheskoy khimii (Rumyanskaya Narodnaya Respublika).
(Tungstic acid) (Tungstoboric acid)
(Sodium hydroxide)

L 34626-66 EWP(j) RM

ACC NR: AP6026171 SOURCE CODE: GE/0063/65/341/01-/0103/0110

AUTHOR: Ripan, R.; Varhelyi, C.; Nyeso, A.

38

B

ORG: Department of Chemistry, Babes-Bolyai University, Cluj, Rumania

TITLE: New cobalt (III) chelate compounds with ethylenediimino-bis-acetylacetone

SOURCE: Zeitschrift fur anorganische und allgemeine Chemie, v. 341, no. 1-2, 1965, 103-110

TOPIC TAGS: cobalt compound, chelate compound, acetone, Schiff base, molecular structure, chemical decomposition, IR spectroscopy, UV spectroscopy

ABSTRACT: Twenty-two new cobalt(III) ammine complexes of as yet unknown types [Co ec(β-picoline)$_2$]X and [Co ec (γ-picoline)$_2$]X (where ec stands for the coordinated Schiff base ethylenediimino-bis-acetylacetone) have been obtained by double decomposition of [Co ec(β-picoline)$_2$]Cl and [Co ec(γ-picoline)$_2$]Cl. X represents I, NCS, BF_4, ClO_4, picrate, 1/2Cr_2O_7, 1/2S_5O_6, [Co(DH)$_2$(NCS)$_2$], [Cr(NH$_3$)$_2$(NCS)$_4$], [Co(NH$_3$)$_2$(NO$_2$)$_4$], 1/3[Cr(NCS)$_6$], 1/3 [Co(NO$_2$)$_6$]. From spectroscopical investigations in the UV and IR regions some structural problems were resolved and discussed. Orig. art. has: 4 figures. [JPRS: 34,669]

SUB CODE: 07, 20 / SUBM DATE: 05Apr65 / OTH REF: 012

Card 1/1

L 00092-66 EWP(t)/EWP(b) DIAAP/IJP(c) JD/JG
ACCESSION NR: AP5025537 RU/0027/65/010/001/0155/0165

AUTHOR: Pascu, N.; Ripan, R. (Academician ARPR); Buturca, F. 29 B

TITLE: Determination with the aid of radioactive gold 198 19 of the crushing and flotation time of auriferous minerals at Rosia Montana, the distribution of gold in the crushed mass and the gold losses in the final sterile

SOURCE: Studii si cercetari de metalurgie, v. 10, no. 1, 1965, 155-165

TOPIC TAGS: radioisotope, gold, mining engineering, radiometry

21

ABSTRACT: The authors used radioactive gold to mark the technological flux in the ore-processing plant and determined radiometrically the following parameters: grinding time, speed of movement through the mill and the crusher, flotation time, distribution of gold in the agitation mass, and gold losses in the final sterile. Orig. art. has: 1 figure, 1 formula, 13 graphs.

ASSOCIATION: Institutul de chimie, Academia R. P. R., Cluj (Institute of Chemistry, RPR Academy)

SUBMITTED: 07Dec64	ENCL: 00	SUB CODE: GO, NP
NR REF SOV: 000	OTHER: 004	JPRS

Card 1/1

L 64949-65 EWT(m)/EWP(b)/EWP(t) IJP(c) JD/JG

ACCESSION NR: AP5023464 RU/0003/64/015/011/0684/0685

32

B

AUTHOR: Ripan, Raluca; Marcu, M.; Cordis, V.

21

TITLE: Contributions to the determination of gold in industrial cyanic solutions

SOURCE: Revista de chimie, v. 15, no. 11, 1964, 684-685

TOPIC TAGS: gold, solution property, cyanogen compound, spectroscopy, analytic chemistry

ABSTRACT: [Authors' English summary modified]: The authors describe a spectrochemical method for the determination of gold in cyanic solutions. The extraction of cyanauric acid and its adsorption on coal gives a relatively large concentration of gold in the samples for spectral determination and removes interfering impurities. The method may be used for concentrations between 5×10^{-7} and 3.2×10^{-5} ; the error is ±10%.

1/2

L 64949-65

ACCESSION NR: AP5023464

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: IC, GC

NR REF SOV: 000

OTHER: 003

JPRS

KC

2/2

RIPAN, Raluca, acad., VARHELYI, Cs.; SIMON, L.

New isomers of position in cobaltic dimethylglyoximates. Studii cerc chimie Cluj 14 no.1:31-40 '63.

1. Chair of Analytic and Inorganic Chemistry, "Babes-Bolyai" University, Cluj.

RIPAN, Raluca, acad., EGER, I., MIREL, C.

Contributions to the study of the properties of some salts of O,O-diethyl ester of dithiophosphoric acid. Pts.1-2. Studii cerc chimie Cluj 14 no.1:49-60 '63.

1. Institute of Chemistry, Rumanian Academy, Cluj Branch.

RIPAN, R., acad.; CALU, N.

Polarographic study on silico-12 molybdic acid. Studia Univ B-B S. Chem 7 no.2:31-37 '62.

Polarographic study on the phospho-12 molybdic acid. Ibid.:39-45

RIPAN, Raluca, acad.; VARHELYI, Cs.; MEKEDY, E.

Derivatives of cobaltic bis-dimethylglyoximato-bis-β-picoline. Studia Univ B-B S. Chem 7 no.2:89-98 '62.

RIPAN, R., acad; NEAGU, V.

Physicochemical study or sodium paramolybdate. Pt.1. Studia Univ B-B S Chem 8 no.1:79-85 '63

1. "Babes-Bolyai" University, Cluj.

RIPAN, Raluca, acad.; VARHELYI, Cs.; SIMON, L.

New isomers of position in cobaltic dimethylglyoxymates. Pt.2.
Studia Univ B-B S Chem 8 no.1:123-130 '63

1. "Babes-Blyai" University, Cluj.

RIPAN, Raluca, acad.; TODORUT, I.

Physicochemical study of the class of wolfram and cobalt heteropolycombinations. Studii cerc chimie Cluj 14 no.1: 9-16 '63.

1. Institute of Chemistry, Rumanian Academy, Cluj Branch.

RIPAN, Raluca, acad., PASCU, N.

Contributions to the study of zinc thiocyanamines with pyridine.
Studii cerc chimie Cluj 14 no.1:17-30 '63.

1. Institute of Chemistry, Rumanian Academy, Cluj Branch.

RIPAN, Raluca, acad.; MARC, Maria

Behavior of tetravalent tellurium in medium of hydrochloric acid. Studii cerc chimie Cluj 14 no.1:41-47 '63.

1. Institute of Chemistry, Rumanian Academy, Cluj Branch.

RIPAN, R.; MIREL, C.

Contributions regarding the properties of some salts of the O,O-diethyl ester of the dithiophosphoric acid. Pt.4. Studii cerc chim 13 no.10:609-618 O '64.

1. Laboratory of Inorganic Chemistry, Institute of Chemistry of the Rumanian Academy, Cluj, 59-65 Donath Street.

RIPAN, Raluca, acad.; VARHELYI, Cs.; HAMBURG, Erica

On the α -dioxymates of transitional metals. Pt. 11. Studii cerc chimie Cluj 14 no.2:227-241 '63.

1. Chair of Inorganic and Analytical Chemistry, "Babes-Bolyai" University, Cluj, and the Institute of Chemistry, Rumanian Academy, Cluj Branch.

RIPAN, Raluca, acad. prof.

Rumanian Scientific Session of Chemistru of the Higher Education Teaching Staff. Studia Univ B-B S. Chem 8 no.1:13-15 '63

RIPAN, Raluca, acad.; MARCU, Gheorghe; TOMUS, Minerva

Study on the formation of the tetrabasic salts of silico-12-wolframic acid and substitution of the metallic ions by the aid of ^{24}Na, ^{42}K, ^{134}Cs, and ^{110}Ag radioisotopes. Studia Univ B-B S Chem 8 no.1:87-91 '63

Study of the decomposition of the silico-12-wolframic acid by the radiochromatographic method. Ibid.:93-95

1. "Bab~~o~~s-Bolyai" University, Cluj.

e

RIPAN, R., acad.; STANISLAV, C.

Behavior of metallic polyphosphates in the presence of ion exchangers. Pt.1. Studia Univ B-B S Chem 8 no.1:131-137 '63

1. "Babes-Bolyai" University, Cluj.

RIPAN, Raluca, acad.; CALU, N.

Polarographic study on the formation of silico-12 molybdic acid. Studia Univ B-B S Chem 8 no.1:501-502 '63

Polarographic study on the formation of poospho-12 molybdic acid. Ibid.:503

1. "Babes-Bolyai" University, Cluj.

RIPAN, R., acad.; VARHELYI, Cs.

New cobalt-(III)-amine dimethylglyoximates with ortho-dianisidine (IX). Studia Univ B-B S. Chem 9 no. 1:7-12 '64.

RIPAN, R., acad.; VARHELYI, Cs.;BOHM, B.

New dimethylglyoximates cobalt-(III)-amines(II). Studia Univ B-B S. Chem 7 no.1:77-85 '62.

RIPAN, Raluca; DUCA, Al.

Behavior in aqueous solution of the heteropolycompounds with tungsten and cobalt (Co^{2+} and Co^{3+}). Studii cerc chim 12 no.3: 199-210 Mr '64.

1. Institute of Chemistry of the Rumanian Academy, Cluj Branch.

RIPAN, Raluca, acad.; MARCU, Gheorghe

Refining metals by the zonal melting method. Pt.1. Studia Univ B-B S Chem 8 no.1:97-100 '63

RIPAN, Baluca, acad; VARHELYI, Cs.; BOHM, B.

New cobalt-(III)-amine dimethylglyoxymates with ortho-and para-ethoxy-aniline. Studia Univ B-B S Chem 8 no.1:113-121 '63

1. "Babes-Bolyai" University, Cluj.

RIPAN, Raluca, DUCA, Al.

Behavior in aqueous solution of the heteropolycombinations with tungsten and cobalt (Co^{2+} and Co^{3+}). Rev. chimie Roum 9 no.3:177-189 Mr '64.

1. Institute of Chemistry of the Rumanian Academy, Cluj Branch.

RIPAN, Raluca, acad.; MARCU, Gheorghe; PASCU, Nicolae; CHIRA, Vasile

Determination of the speed of circulation by phases in auriferous pyrite flotation by radioactive gold 198. Studia Univ B-B S. Chem 7 no.1:61-69 '62.

RIPAN, Raluca, acad.; MARCU, Gheorghe; MURGU, Gheorghe

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