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CA

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Titrimetric gas analysis. I. Determination of oxygen. Elemér Schulek and Ernö Pungor (Univ. Budapest). *Magyar Kém. Folyóirat* 56, 250-5(1950).—Instead of analyzing the whole gas sample, a small part is tested by means of a special gas measuring and analyzing app. Two methods have been worked out, one serves for detg. O_2 content in gas samples contg. O_2 above 0.1 vol. %. This method is based on the absorption of O_2 by MnO at 200-50°. This reagent is produced by heating $MnCO_3.2H_2O$ in a N current to 300°. The temp. is decreased to 200-50°, the gas sample is passed through the app., the granulated glass (contg. Mn oxide) is washed with HCl contg. KI and starch, and then titrated with 0.1 N $Na_2S_2O_3$. When analyzing gas samples with O_2 below 0.1 vol. %, a 5% soln. of $MnCl_2.4H_2O$ is treated with 1.0 N NaOH contg. 5% KI and 1-3 drops 1% starch. The freshly pptd. $Mn(OH)_2$ is suitable for absorbing traces of O_2 in the gas sample. I. F.

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NEW TITRATION METHODS IN GAS ANALYSES. II. IODIMETRIC DETERMINATION OF NITROGEN OXIDE. Schulek, E. and Pungor, E. (Magyar Kem. Folyoirat (Hungarian Chem. J. 6, Nov. 1950, vol. 56,396,397: title in Brennstoff Chem., Sept. 1951, vol. 32, 282).

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6. Titrimetric method of gas analysis. The determination of large and minute amounts of gas mixtures, by I. Schulek and I. Pungor ("Magyar Kémiai Folyóirat" — Hungarian Journal of Chemistry — Vol. 56, No. 7, pp. 250-255, July, 1950).

A new apparatus was constructed for the accurate measurement of minute amounts of gas. By complementing the apparatus with a burette, the analysis of gases may also be effected. The volume of gas is first measured in the apparatus, then the gas is led above manganese(II)oxide, which at a higher temperature, absorbs the oxygen content of the gas. The higher manganic oxides thus formed are dissolved in hydrochloric acid containing potassium iodide in the manner described, and the precipitated iodine is titrated with a sodium thiosulfate solution. Another method was worked out for the analysis of gas mixtures containing about 0.1 volumetric percentage of oxygen. The basic principle of this method is to bind the oxygen content of the gas with freshly precipitated manganese (II) hydroxyde and to determine iodometrically the formation of higher manganese hydroxydes. The oxygen content of the air can be accurately and satisfactorily reproduced in a 5 ml air sample with the aid of the first method. The second method is suitable for the accurate determination of the oxigen contamination in 12 to 20 ml samples of various industrial gases.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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C. A.

Potentiometric determination of iodide ions with silver nitrate solution and vice versa with the aid of the hydrogen electrode E. Schulek and E. Pungor (Univ. Budapest). *Anal. Chim. Acta* 5, 422-5(1951); cf. *C.A.* **44**, 10575*h*(in German). Iodides can be titrated potentiometrically with $AgNO_3$ soln., or Ag^+ with KI, with a H indicator electrode, if *p*-ethoxychrysoidine is added. Landon A. Sarver

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Potentiometric measurement of iodide ion with silver nitrate solution and the potentiometric measurement of silver ion with a potassium iodide solution with a hydrogen electrode. Elemér Schulek and Ernö Pungor (Eötvös Univ., Budapest, Hung.). *Magyar Kém. Folyóirat* 57, 11-13(1951). When 0.001 *M* KI or $AgNO_3$ solns. are titrated with 0.01 *M* $AgNO_3$ or KI solns., the potentiometric method with the H electrode gave satisfactory results, if 12 drops of a 0.2% EtOH soln. of *p*-ethoxychrysoidine was added per 100 ml. liquid. Istvan Finaly

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNCOR, E. Hungary CA: 47:12109

with E. SCHULEK and J. KÖTHELYI

L. Eotvos Univ., Budapest

"The Volhard halogen determination."

Anal. Chim. Acta 8, 229-34 (1953) (in German).

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

FUNGOR, E. Hungary CA: 47:11957

with E. SCHULEK and F. GUBA

L. Eotvos Univ., Budapest

"Electron-microscope control of envelope thickness in adsorption phenomena."

Anal. Chim. Acta 9, 261-73 (1953) (in German).

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

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PUNGOR, E.

HUNG

9. Simultaneous flame spectrophotometric determination of calcium, strontium and barium — *Kalcium, stroncium és bárium lángfotométeres mikromeghatározása egymás mellett* — A. Hegedűs, T. Millner and E. Pungor. (Hungarian Journal of Chemistry — *Magyar Kémiai Folyóirat* — Vol. 59, 1953, No. 10., pp. 304—309, 7 figs., 4 tabs.)

Determination of calcium, strontium and barium in aqueous solutions containing all three elements at the same time, using the Beckman Model DU spectrophotometer and its flame attachment with oxyhydrogen flame. (Optimum pressure for hydrogen was found to be 0.14 atm and for oxygen 1.09 atm.) Emission spectra of calcium, strontium and barium were measured in the range of 300 mμ to 1000 mμ. It was found that strontium and barium interfere with the characteristic spectral lines of calcium at 424, 554 and 624 mμ; furthermore, calcium and barium interfere with the lines of strontium at 460 and 670 mμ, and calcium and strontium in turn interfere with the lines of barium at 745 and 870 mμ. Therefore calcium was determined at 424 mμ using an ultraviolet-sensitive photocell and a 0.1 mm slit, and barium at 870 mμ using a red-sensitive photocell and a 0.2 mm slit. By the introduction of this procedure error was negligible if the elements to be determined were present in amounts of 0 to 800 μg/ml and the concentration of the interfering elements ranged from 0 to 1200 μg/ml. Error was ± 2%. Determination of calcium, strontium and barium in a 1 mg sample, dissolved in 1 ml of water, atomized into the flame took only a few minutes. Composition of the cathode emission layer of a single electronic tube or fluorescence light could be determined by this method.

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PUNGOR, E.

Peroxy compounds. I. Iodometric determination of peroxydisulfuric acid in the presence of hydrogen peroxide (chlorine method). E. Schulek, E. Pungor, and J. Trompler (L. Eötvös Univ., Budapest). *Acta Chim. Acad. Sci. Hung.* 4, 393–404(1954)(English summary).—$H_2S_2O_8$ (I) in the presence of H_2O_2 can be detd. if the H_2O_2 is first removed by treatment with Cl water (II). The excess II is then removed as CNCl by adding KCN, acidifying with H_2SO_4, and passing CO_2 gas through the soln. for 20 min. The I is detd. iodometrically in the presence of considerable $(NH_4)_2SO_4$. II. Iodometric determination of peroxydisulfuric acid in the presence of hydrogen peroxide (bromine method). E. Schulek, J. Trompler, and E. Pungor. *Ibid.* 405–10.—The method is somewhat similar to the above method, except that Br replaces Cl and the excess Br is removed with phenol before the iodometric detn. of I. III. Iodometric determination of peroxydisulfuric acid in the presence of hydrogen peroxide (thiocyanate method). E. Pungor, E. Schulek, and J. Trompler. *Ibid.* 411–16.—The procedure is similar to the above methods except that the H_2O_2 is removed by KCNS in the presence of $(NH_4)_2MoO_4$. IV. Determination of peroxymonosulfuric acid and hydrogen peroxide in the presence of each other (thiocyanate method). *Ibid.* 417–22.—By taking advantage of the great difference in rates of reaction between KCNS-H_2O_2 and KCNS-H_2SO_5, H_2O_2 and H_2SO_5 can be detd. together. V. Iodometric determination of peroxymonosulfuric acid, peroxydisulfuric acid, and hydrogen peroxide in the presence of each other. *Ibid.* 423–8.—Since KCNS reacts instantaneously with H_2SO_5 (but not with H_2O_2 or I), and reacts in the presence of $(NH_4)_2MoO_4$ with both H_2SO_5 and H_2O_2 (but not with $H_2S_2O_8$), it is possible to det. all 3 components by analyzing 3 different solns., the 1st "as is," the 2nd treated to remove H_2SO_5, and the 3rd treated to remove H_2SO_5 and H_2O_2. VI. Hydrogen peroxide-sulfuric acid and peroxydisulfuric acid-sulfuric acid systems. E. Schulek, E. Pungor, and J. Trompler. *Ibid.* 429–44.—A study of the correlation of the systems H_2O_2-H_2SO_4 and $H_2S_2O_8$-H_2SO_4 with the concn. of H_2SO_4, and with the duration and temp. of treatment is presented in connection with the analytical procedures developed above (I–V). VII. The existence and iodometric determination of a peroxysulfuric acid of a new type ($2H_2SO_5.H_2O_2$). *Ibid.* 445–56.—Analyses carried out by the Br method indicated the existence of a new type of peroxy-sulfuric acid: $2H_2SO_5$-H_2O_2, for which the name "solvate" peroxymonosulfuric acid is suggested. Philip S. Baker

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PUNGOR, E.

HUNG.

19. On the chemistry of peroxy compounds. (In German) — E. Schulek, E. Pungor, J. Trompler. (Acta Chimica Academiae Scientiarum Hungaricae — Vol. 4, 1954, No. 2—4, pp. 445—456. 5 figs., 3 tabs.)

Analyses carried out by the so-called bromide method developed by the authors for the determination of various peroxy sulphuric acids demonstrated the existence of a new type peroxy sulphuric acid of the formula $2H_2SO_4 \cdot H_2O_2$. The authors denominated this compound as "solvate" peroxy monosulphuric acid (Caro's acid). Attempts are being made to find an explanation, based on structural chemistry, for the formation of peroxy monosulphuric acid and "solvate" peroxy monosulphuric acid.

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PUNGOR, F.

HUNG

613. Peroxy compounds. II. Iodimetric determination of persulphuric acid in the presence of hydrogen peroxide. (Bromine method.) E. Schulek, J. Trompler and E. Pungor (*Acta Chim. Hung.*, 1954, 4 [2–4], 405–416). The sample (0·7 to 1·4 mg of H_2O_2 or 5 to 10 mg of $H_2S_2O_8$) is diluted to ≃ 20 to 25 ml with water in a glass-stoppered 100-ml Erlenmeyer flask, and shaken with bromine water; excess of Br is removed by adding 1 per cent. hydrazine dropwise. One or two drops of methyl orange are added to the colourless solution, which is then treated gradually with ≃ 0·01 *N* bromine water until the red colour of the indicator disappears. After addition of 1 to 2 drops of 5 per cent. phenol, the mixture is thoroughly shaken. Alternatively, most of the Br can be removed with hydrazine and the remainder immediately with phenol. After 5 min., KI (0·5 g) and $(NH_4)_2SO_4$ (4 g) are added, the solution is acidified with 10 per cent. H_2SO_4 (≃ 0·75 ml), heated at ≃ 50° C for 5 min., cooled, and the separated I is titrated with 0·01 *N* $Na_2S_2O_3$ in the presence of starch. The method is valid for 0·1 *N* solutions. The simultaneous determination of H_2O_2 and $H_2S_2O_8$ is carried out as described in Abstract 612 above.

H. WREN

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PUNGOR, E.

HUNG.

614. Peroxy compounds. III. Iodimetric determination of persulphuric acid in the presence of hydrogen peroxide. (Thiocyanate method.) E. Pungor, E. Schulek and J. Trompler (*Acta Chim. Hung.*, 1954, 4 [2–4], 411–416).—The sample (≃ 0·7 to 1·4 mg of H_2O or 5 to 10 mg of $H_2S_2O_8$) is diluted to ≃ 20 ml with water in a glass-stoppered 100-ml Erlenmeyer flask and treated with 10 per cent. H_2SO_4 (0·2 ml), 0·1 *M* KCNS (≃ 4 ml) and 1 drop of 5 per cent. ammonium molybdate. The liquid is shaken and kept for 3 min. with frequent loosening of the stopper. It is made alkaline for a few seconds with 4 per cent. NaOH (1 ml) and then acidified with 10 per cent. H_2SO_4 (≃ 1 ml). After addition of KI (≃ 0·5 g) and $(NH_4)_2SO_4$ (4 g), the loosely stoppered flask is heated at 50° C for 5 min., then cooled, and the liberated I is titrated with 0·01 *N* $Na_2S_2O_3$ in the presence of starch solution (which is added towards the end of the titration after dilution with ≃ 60 ml of water). The sequence of addition of reagents is important. The use of 0·1 *N* solutions is not recommended. H. WREN

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Peroxy compounds. IV. Iodimetric determination of permonosulphuric acid (Caro's acid) and hydrogen peroxide in presence of one another, and (V) in presence of persulphuric acid (thiocyanate method). E. Pungor, E. Achulik, and L. Trümpler (*Acta chim. hung.*, 1954, 4, 417—422, 423—428).—IV. The method is based on the greater reactivity of H_2SO_5 with KCNS compared with that of H_2O_2. H_2O_2 is determined iodimetrically after treatment of the mixture with KCNS, and $H_2O_2+H_2SO_5$ by direct iodimetric titration.

V. Treatment of a mixture of the peroxy-compounds with KCNS decomposes only the H_2SO_5, and with KCNS in presence of NH_4 molybdate leaves only H_2O_2 unchanged. The residual per-compounds are determined iodimetrically after each of these treatments, and the total per-compound determined iodimetrically by addition of KI and thiocyanate. Each component is calculated by difference.

H. WREN.

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616. Peroxy compounds. V. Iodimetric determination of permonosulphuric and peroxydisulphuric acid and of hydrogen peroxide in the presence of one another. (Thiocyanate method.) E. Pungor, E. Schulek and J. Trompler (*Acta Chim. Hung.*, 1954, 4 [2–4], 423–428).—For the determination of total H_2SO_5, $H_2S_2O_8$ and H_2O_2, the sample (≃ 1·2 mg of O) is diluted with water to ≃ 20 to 25 ml in a glass-stoppered 100-ml Erlenmeyer flask and acidified with 10 per cent. H_2SO_4 (≃ 1 ml). After addition of KI (0·5 g), $(NH_4)_2SO_4$ (4 g) and one drop of 5 per cent. ammonium molybdate solution, the solution

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is warmed at ≃ 50° C for 5 min., and the liberated I is titrated in the cooled solution with 0·01 *N* $Na_2S_2O_3$ in the presence of starch solution. For the determination of $H_2S_2O_8$ plus H_2O_2, the sample, measured and diluted as described above, is shaken after the addition of 10 per cent. H_2SO_4 (≃ 0·2 ml) and 0·1 *M* KCNS (≃ 0·5 ml). After ≃ 15 sec., KI (0·5 g) is added and the solution is well shaken, treated with 1 drop of 5 per cent. ammonium molybdate solution followed by $(NH_4)_2SO_4$ (4 g), warmed at 50° C and cooled. The liberated I is titrated with 0·01 *N* $Na_2S_2O_3$ in the presence of starch solution (added towards the end of the titration and after dilution with ≃ 50 ml of water). For

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the determination of $H_2S_2O_8$, the sample, measured and diluted as described above, is treated with one drop of 5 per cent. ammonium molybdate solution and 0·1 *M* KCNS (≃ 4 ml). After 3 min., the solution is made alkaline for a few sec. with 4 per cent. NaOH (1·5 ml) and re-acidified with 10 per cent. H_2SO_4 (≃ 1 ml). Potassium iodide (0·5 g) and $(NH_4)_2SO_4$ (4 g) are dissolved in the mixture, which is heated at ≃ 50° C for ≃ 5 min. The liberated I is titrated in the cooled solution with 0·01 *N* $Na_2S_2O_3$ in the presence of starch solution. The method is only recommended for use with 0·01 *N* solutions. The sequence of addition of the reagents is important. The composition of the anode liquid in H_2O_2 manufacture is thus determined; after 24 hr. the solution contains almost pure H_2SO_4.

H. WREN

E. Tengor

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[illegible], E. : [illegible], A.

"Flame Photometry. I. Quantitative Spectrum Analysis with the Aid of Flame Excitation (To be Contd.)", P. 17[illegible]. (MAGYAR KEMIKUSOK LAPJA, Vol. [illegible], No. [illegible], June 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions,(EEAL), LC, Vol. 4, No. 1, Jan. 1955, Uncl.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

HUNGOR, F., VEGEDUS, A.

"Work of the Agrochemical Research Institute", P. 187. (MAGYAR TUDOMANYOS AKADEMIA, Vol. 9, No. 6, June 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955, Uncl.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, ERNO

15347* (Flame Photometry.) Lángfotometria. II. (Quantitative Spectrography by Means of Flame Propagation.) Mennyiségi színképelemzés lánggerjesztéssel. Ernő Pungor and András Hegedüs. *Magyar Kémikusok Lapja*, v. 9, no. 7, July 1954, p. 201-207.

Calibration and additive and internal standards. 25 ref.

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PUNGOR, E

GERM

Morphology of barium sulfate precipitates prepared by the L. W. Winkler method. E. Schulek, E. Pungor, and F. Gubs (L. Eotvos Univ., Budapest). *Anal. Chim. Acta* 10, 508-12(1954)(in German); cf. *C.A.* 47, 11957*e*.—By investigations employing the electron microscope it is shown that an addn. of NH_4Cl at the time of the pptn. of $BaSO_4$ according to W.'s method exerts an influence on the morphology of the ppt.; the latter then filters easily.

Landon A. Sarver

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PUNGOR, E.

709

GERM

Electron-microscope investigations in the sphere of crystal formation. E. Pungor, E. Schulek, and F. Guba (L. Eötvös Univ., Budapest). *Anal. Chim. Acta* 11, 12-17 (1954)(in German).—The microstructure of NH_4Cl crystals was studied with the electron microscope. The results confirm the accuracy of the Kast-Smekal representation (*C.A.* 22, 912, 3074).

Landon A. Sarver

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PUNGOR, E.: KAROLY TURGE, I.: SCHULEK, E.

Oxidation reaction on silver-iodide surfaces. p. 183. Vol 6, no. 1/2, 1955. KOZLEMENYEI. Budapest, Hungary.

So: Eastern European Accession. Vol 5, no. 4, April 1956

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24. Reactions on silver iodide surfaces. (In German) E. Schulek, E. Pungor, I. Konkoly Thege. *Acta Chimica Academiae Scientiarum Hungaricae.* Vol. 7, 1955, No. 1—2, pp. 149—154, 5 figs.

Investigating the mechanism of the indication reactions of adsorption indicators it was found that in the case of *p*-ethoxy-chrysoidine the functioning of this indicator is the consequence of an acid-base reaction occurring on the surface through the action of excess autogenous (Ag^+ or I^-). According to the adsorption curve obtained by experimental measurements for *p*-ethoxy-chrysoidine the dye adsorption varies as a function of the quality and quantity of the autogenous ions. The slope of the tangent of the adsorption curve remains constant even at the equivalency point where I = Ag. The experiments were conducted with silver iodide precipitates prepared in two different ways. In the first series of experiments a silver iodide prepared in advance by precipitation filtration, washing and drying in the dark was investigated. In the second series the silver iodide precipitated directly in the reaction vessel was examined. Experimental data obtained confirmed that interaction between silver iodide and nitrous acid occurs in the presence of potassium chloride. The reaction proceeds in conformity with the Nernst equation.

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PUNGOR, E.; SCHULEK, E.; KONKOLY-THEGE, I.

Reaction on the surface of silver iodide. p. 561. KOZLEMENYEI. Budapest. Vol. 5, no. 4, 1955.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, No. 2, Feb. 1956

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PUNGOR, E.

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Reactions on the surface of silver iodide. E. Schulek, E. Pungor, and I. Konkoly Thege (L. Eötvös Univ., Budapest). *Acta Chim. Acad. Sci. Hung.* 7, 149-54(1955)(in German); cf. *C.A.* 49, 12031*i*.—Exptl. results confirmed that a AgI ppt. can react with HNO_3 in the presence of KCl to form I_2. Quant. data are presented to show that the reaction is proportional to the surface area of the AgI and the concn. of the KCl in accordance with the Nernst equation. G. Dragt

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, E.: ZAPP, E.

Investigation of alkali metals by flame photometry. In German. p. 185.

Vo. 7, no. 1/2, 1955

SOURCE: Monthly list of East European Accessions, (EEAL), LC, Vol. 5
No. 3, March 1956

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, E.

26. Flame photometric investigations on alkali metals. (In German) E. Pungor, E. E. Zapp. *Acta Chimica Academiae Scientiarum Hungaricae.* Vol. 7, 1955, No. 1—2, pp. 185—198, 5 figs., 7 tabs.

The flame photometric behaviour of lithium, sodium, potassium, rubidium and cesium was investigated in the presence of each other and in the presence of different anions. It was established that particularly the readily ionizing alkali metals will greatly influence their mutual emission. To explain this phenomenon it was assumed that a very high electron concentration exists in the flame. It was proved by experiments that those alkali metals which have high ionization potentials (lithium, sodium) do not have an influence on their mutual emission nor on the emission of the other alkali metals.

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PUNGOR, E.

Oxidation reactions occurring on the surface of silver iodide. E. Pungor, I. Konkoly Thege, and E. Schulek (L. Eötvös ~~Univ., Budapest~~). *Acta Chim. Acad. Sci. Hung.* 8, 49-55(1955)(in German)(English summary); cf. *C.A.* 50, 4576g.—AgI (5-20 mg.) in a microdistn. app. was treated with 2 ml. 2*N* H_2SO_4 and twice the amt. of oxidant (0.1*N* KIO_3 soln.) theoretically necessary for complete oxidation to I. The I was distd., absorbed in a mixt. of 3 ml. 0.1*N* KOH and 10 ml. H_2O_2 and detd. by titration after the distillate was acidified with 10% H_2SO_4. Oxidation with KIO_3 or with Ce(IV) ions occurs only in the presence of alkali chlorides. The amt. of I liberated during oxidation is a function of the Cl concn. The peptizing and binding effects of alkali chlorides on released Ag ions appear to be mainly responsible for the oxidation on the surface of AgI.

Ernst M. Goldstein

Chem

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PUNGOR, E.

The system hydrogen peroxide-acetic acid. E. Pungor, J. Trompler, Zs. Hemport and E. Schulek (*Acta chim. hung.*, 1955, 8, 321—335).—The rate of formation of peracetic acid in the system H_2O_2-acetic acid was measured as a function of acetic acid concn. and of temp. The rates of dipole association and dissociation were also examined and both found to be equally low. (13 references.) J. S. C.

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PUNGOR, E.

28. Flame photometric investigations of alkali metals — E. Pungor, E. Zapp. (Magyar Kémiai Folyóirat — Vol. 61, 1955, No. 4, pp. 117—122, 5 figs., 7 tabs.)

Investigations were carried out to obtain data concerning the effects exercised by the alkali metals on their mutual emission and to establish the interference caused by different anions. A Beckmann Model DU spectrophotometer equipped with an atomizer designed by the authors and a hydrogen-oxygen flame were used for the experiments. Evaluation of the experimental data led to the following conclusions: in the case of lithium and sodium the thermal dissociation was the most influential whereas in the case of potassium, rubidium and caesium the ionization processes occurring in the flame had the most decisive influence on the formation process of the relationship concentration vs. emission. These findings furnish the explanation for the phenomenon encountered in practice according to which the three latter elements show a strong mutual interference. Monobasic acid radicals (chloride, bromide, etc.) interfere only if their combustion produces a heat of reaction so high that it causes a local increase in the flame temperature. Sulphuric acid has only a negligible effect on the emission of sodium and potassium. A strong interference was experienced in the presence of ammonium sulphate and ammonium phosphate during the determination of all alkali metals. The excitation and the ionization of the metal ions was promoted by perchlorate ions.

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Pungor, Ernc.

27

Flame photometric microdetermination of calcium, strontium and barium in the presence of each other. Erno Pungor and András Hegedus (Eotvos-Lóránd Tudományegyetem Szervetlen, Budapest). *Magyar Kém. Folyóirat* 61, 303-12(1955).—The procedure described previously (cf. *ibid*, 59, 304(1953)) was modified to enable the detn. of small quantities of Ba in the presence of excess Sr and Ca. If the aperture is reduced from 0.5 mm. to 0.2 mm., the disturbing effects of Sr and Ca at a wave length of 870 mμ will disappear. The spectra of the elements involved were studied in an attempt to explain the reasons for this condition. L. G. Aruaj

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Pungor, E

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The role of the flame temperature in the flame photometric determination of the alkali metals. E. Pungor, A. J. Hegedüs, I. Konkoly Thege, and E. E. Zopp (L. Eötvös Univ., Budapest.). *Mikrochim. Acta* 1956, 1247-63.—The obtaining of a quiet flame with the aid of vapor deflectors has no purpose with devices which deflect only a part of the flame on the 0.001- 1-mm.-wide slit of the monochromator. When the atomizing is done in connection with a deflector, the EtOH effect appears. Likewise in addn. to the atomizing rate, the flame temp. plays the dominant part in the familiar calibration curves with whose aids the most favorable combustion and atomizing mixts. are set up. Li and Na are highly ionized only in the oxyhydrogen flame so they do not interfere in the photometric detn. of the other alkali metals. K, Rb, and Cs, on the other hand, undergo considerable ionization in this flame whereby the emission is increased through mutual repression of the ionization. By mixing N with the O the flame temp. can be lowered by over 1000° without change of the other parameters and this averts the disturbance of the ionization and so makes possible the detn. of the 3 last elements. The effect of the flame temp. on the form of the calibration curves is especially striking in the case of Cs, whose calibration curve, because of temp. lowering, changes from an S-form into one of satn. character. The anion influence is ascribed to the thermal dissocn. of the sprayed salts or of those that form in the flame.

W. T. Hall

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PUNGOR, E.

Manganous carbonate and some of its valuable gas-analytical properties. E. Schulek and E. Pungor (L. Eötvös Univ., Budapest). *Mikrochim. Acta* 1950, 1118-19.—By pouring a soln. of $MnCl_2 \cdot 2H_2O$ into a soln. of $NaHCO_3$, filtering, washing with water, then with 96% EtOH, rinsing with C_6H_{14} and drying, some pulverulent $MnCO_3$ was prepd. At 70-100° it loses its water of crystn. and at 250-300° goes over into light-green MnO. The latter is highly sensitive to O and other gases which readily release O (NO, NO_2, and N_2O). W. T. Hall.

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PUNGOR, E.

800. New methods in gas analysis. I. Measurement of tension by microchemical methods. (Vapour space analysis.) E. Schulek, E. Pungor and L. Trompler (Inst. anorg. und anal. Chem. der L. Eötvös Univ., Budapest). *Mikrochim. Acta*, 1956, (4–6), 1005–1022.—The basic principles of gas analysis are reviewed. A measuring device is described which permits quantitative sampling of gases. The individual gases are determined on separate portions of material. The procedure is illustrated by analysis of methanol and ethanol.

M. F. C. LADD

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PUNGOR, E.

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Chem Hops

New ideas in gas analysis. I. Tension measurement on a microscopic scale. E. Schulek, R. Pungor, and J. Trompler (Univ. Budapest). Mikrochim. Acta 1956, 1005-22 (in German). After a crit. discussion of the basic principles of gas analysis, a new device is described which provides for taking samples from gases with exactness. The individual constituents of the gases or vapors are detd. from separate portions. The usefulness of the procedure was shown by the tension curves of abs. EtOH and MeOH. W. T. Hall

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Pungor, Erno

23

Flame-photometric determination of the alkali metals. ERNŐ PUNGOR AND ERIKA E. ZAPP. *Acta Chim. Acad. Sci. Hung.*, 10 [1-3] 179-91 (1956) (in German).—The measurements were made with the Beckmann DU spectrophotometer. Li, Na, and K can be determined in the presence of each other, but with other alkali metals interfering effects appeared which could not be eliminated. A method was developed for the determination of Li, Na, and K in the presence of large amounts of Ca which is suitable for use in analyzing substances according to the J. Lawrence Smith method. In the case of Na determinations, all solutions should be prepared in Na-free glass flasks. 4 figures. —M. HA.

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Pungor, E.

15. Studies on the hydrogen peroxide—acetic acid system. (In German) E. Pungor, I. Trompler, Zs. Remport, ~~E. Schulek~~. *Acta Chimica Academiae Scientiarum Hungaricae*. Vol. 8, 1956, No. 4, pp. 321—333, 3 figs., 6 tabs.

Solutions containing acetic acid, purified by distillation, in different concentrations (20, 40, 60, 80 and 90%) were prepared and the properties of the hydrogen peroxide-acetic acid systems were investigated at 50 and 73° C. The rate of peroxy-monoacetic acid formation was determined as a function of the acetic acid concentration and of the temperature. The reaction kinetic effects of the dipole associations were investigated in a solution containing peroxy-monoacetic acid and hydrogen peroxide. Experimental data obtained proved that the rates of dipole dissociation and dipole association were very low compared to the corresponding solutions containing sulphuric acid. These phenomena were attributed to the occurrence of reactions leading to complex formation.

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FUNGOR, E.; ZAPF, E.

Data on the determination of alkali metals by flame photometry. In German. p. 179. ACTA CHEMICA. (Magyar Tudomanyos Akademia) Budapest. Vol. 10, no. 1/3, 1956.

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 5, No. 12, December 1956

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PUNGOR, ERNO

5

Flame photometric examination of emissions measured on molecular bands. I. Flame photometric properties of copper salts. Ernő Pungor and Ilona Konkoly-Thege (Anal. Kém. Intézete, Budapest). *Magyar Kém. Folyóirat* 62, 228-31(1956); *Acta Chim. Acad. Sci. Hung.* 13, 1-6 (1957)(in German).—Cu shows at. emission at 324 and 327 mμ; however, observation is disturbed by the emission of the H and O of the flame. Therefore, examns. were confined to the mol. band. Analytical grade $CuSO_4.5H_2O$ was used with a Beckman flame photometer; the aperture was set at 0.5 mm. No appreciable change in the characteristics of the spectrum was found in the presence of AcOH, $HClO_4$, and H_2SO_4; however, there is an increase in emission depending upon the nature of the anion. A large peak is observed around 538 mμ, a smaller one around 435 mμ. The emission is an approx. linear function of the concn. II. Flame photometric examination of boric acid. *Magyar Kém. Folyóirat* 62, 231-4(1956); *Acta Chim. Acad. Sci. Hung.* 13, 39-46(1957)(in German).—The emission of boric acid between 440 and 570 mμ was measured with 10^{-1} mol./l. solns. in water, HCl, 50% MeOH, and 50% EtOH. The curves indicate that in each case the same emittant is present. The emission increases with the increase of alcs. present; this is attributed to the effects of surface tension, internal friction, and the combustion heat of the alcs. Because of this influence the selection of EtOH by Dean and Thompson (*C.A.* 49, 4445b) for this detn. is deplored. Ester formation was found not to be a factor. The curves are similar to those for Na, Ca, Ba, Mg, and Ag. HCl and H_2SO_4 have no influence upon the emission while $HClO_4$ increases and NaOH attenuates it. G. I. Brown

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PUNGOR, E.

12. **Flame photometric study of magnesium compounds.**
E. Pungor, I. Konkoly-Thege. *Magyar Kémiai Folyóirat.* Vol. 62, 1956, No. 1, pp. 17—26, 20 figs., 1 tab.

Anions and cations seriously interfere with the flame photometric determination of magnesium. Two procedures were proposed to eliminate the difficulties caused by anions: (1) standardization of the apparatus against a solution containing the anions present in the sample solution in the same concentration; (2) addition of one of the anions in great excess to both the standard and the sample solution. In the second procedure it was found advantageous to increase the concentration of the chloride ions — the experimental measurements were carried out in 1-*M* solutions of hydrochloric acid — since their presence also enhanced the emission of the magnesium ions. The interference of cations was eliminated by measuring the emission at two different wave lengths and by calculating a correction from these values. The emission of the sample was measured at 371 mμ (corresponding to the peak of the magnesium oxide emission) and then at 350 mμ (lowest emission value). Based upon these data the concentration of the magnesium ions was determined with adequate accuracy even in the presence of sodium, potassium or calcium ions. Under the experimental conditions the measurable limit of magnesium concentration was found to be 10^{-3} mmol per ml.

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HUNGARY/Optics - Spectroscopy K-7

Abs Jour : Ref Zhur - Fizika, No 5, 1958, No 11976

Author : Pungor Erno, Konkoly Thege Ilona
Inst : Not Given
Title : Investigation of Atomic Emission with the Aid of Flame Photometry

Orig Pub : Magyar kem. folyoirat, 1956, 62, No 7, 225-228

Abstract : An investigation was made of the intensity of the emission lines of silver in gas flames as a function of the temperature, the presence of various anions, and other impurities. It was established that a decisive influence on the emission is exerted by the degree of dissociation of the salts of silver in the flames and also the intensifying action of the impurities, connected with their influence on the temperature of the flame or on the surface tension of the investigated solutions.

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PUNGOR, E.

2619. p-Ethoxychrysoidine as an acid - base and redox indicator. E. Pungor and E. Schulek (Inst. Inorg. and Anal. Chem., L. Eötvös Univ., Budapest, Hungary). *Z. anal. Chem.*, 1950, 150 (3), 161-166.—From the extinction curves of *p*-ethoxychrysoidine at various pH values, a mechanism is suggested for the colour changes that occur when this compound is used as an acid - base indicator. The formation of quaternary ammonium bases is considered to take place. When used as a redox indicator, *p*-ethoxychrysoidine is oxidised to an azoxy product. The redox potential is 0·76 V when measured against a normal hydrogen electrode.

J. H. WATON

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PUNGOR, E

2618. **New theory of adsorption indicators. p-Ethoxychrysoidine as an adsorption indicator.** E. Pungor and E. Schulek (Inst. Inorg. and Anal. Chem., L. Eötvös Univ., Budapest, Hungary). *Z. anal. Chem.*, 1956, 150 (3), 166–178.—*p*-Ethoxychrysoidine is known to be a suitable adsorption indicator for the determination of I′, but it differs from other similar indicators in not showing a large change in adsorption at the end-point. Experiments have been carried out on the adsorption of indicators on to silver halide surfaces which have led to the replacement of Fajans's theory by a new theory of adsorption indicators. The physicochemical constants of the adsorbed indicator depend on the nature and amount of the ions adsorbed on to the surface of the ppt. The change of one of these constants (which one must be decided for each indicator) at the end-point of the titration causes a change in colour. When *p*-ethoxychrysoidine is used in the determination of I′, the indicator undergoes an acid - base change at the end-point. In the presence of an excess of I′, adsorbed I′ attract protons so that the indicator assumes the acid form, leaving the soln. alkaline. In the presence of an excess of Ag^+, adsorbed Ag^+ expel protons so that the indicator assumes the alkaline form whilst the soln. becomes acid.

J. H. WATON

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PUNGOR E.

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2649. The examination of magnesium compounds with the flame photometer. E. Pungor and L. Konkoly-Thege (Eötvös Loránd Sci. Univ., Inst. Inorg. and Anal. Chem., Budapest). *Magyar Kém. Foly.*, 1956, 61 (1), 17–20.—Various anions and cations interfere with the flame-photometric determination of Mg. Its emission spectrum is independent of the anion present, but the absolute value of the emission depends on the anion because various salts dissociate in the flame, at various velocities, to emitting compounds (MgO or —MgOH). The addition of Cl′ (as HCl) increases the emission, because $MgCl_2$ hydrolyses rapidly. To correct for the anions present, the unknown soln. and the calibrating solutions should contain the same concn. of the same anions. These can be predicted from the previous chemical treatment of the substance. Alternatively, in each soln. one anion can be kept in a large excess, while keeping the concn. of the others similar to the standard and unknown soln. The interference by Cs, Rb, Na, K and Ca can be calculated by determining the emissions at two wavelengths (350 and 371 mμ). A. G. PETO

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PUNGOR, E.

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p-Ethoxychrysoidine as acid-base indicator and as oxidation-reduction indicator. E. Pungor and E. Schulek (L. Eötvös Univ., Budapest). Z. anal. Chem. 150, 161-6 (1956).—The color change as acid-base indicator takes place at pH 3.5-5.5. An explanation of the color change is given on the basis of the quinoidal regrouping and also by the more modern resonance theory. The behavior of the indicator as an oxidation-reduction indicator is attributed to the reversible change of .N:N. to .N(:O):N., with an e.m.f. of 0.76 v. W. T. Hall

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New theory of adsorption indicators. β-Ethoxychrysoidine as adsorption indicator. E. Pungor and E. Schulek (L. Eötvös Univ., Budapest). Z. anal. Chem. 150, 166-78 (1956).--Adsorption appears to be the primary reaction but is insufficient to account for all the behavior. The substance consts. of the indicator dye change in accordance with the adsorption, the change depending on the quality and quantity of the ions at the surface and one of these consts. causes the color change at the end point of a titration.

W. T. Hall

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HUNSON, E.

16. New methods of gas analysis. II. Volumetric determination of gas mixtures. 1. Iodimetric determination of oxygen. E. Schulek and E. Pungor (Eötvös Univ., Budapest, Hungary). *Mikrochim. Acta*, 1956, (7–8), 1120–1135.—Methods are described for the determination of oxygen and nitrogen oxides in gas mixtures. For O, the principle is that of absorption by MnO (*cf. Anal. Abstr.*, 1957, 4, 15) at 200° to 250° to form higher oxides of Mn which, after dissolution in HCl and addition of KI, are determined iodimetrically. The apparatus, which has been previously described (*cf. Mikrochim Acta*, 1956, 1005), provides for the prep. of the MnO *in situ*. Macro- and micro-procedures are given for the determination of > 0·1% v/v and < 0·1% v/v, respectively. For nitrogen oxides, modifications of these methods are made whereby N_2O_4 or NO_2 is reduced to NO by means of KI, followed by thermal decomposition in the presence of MnO and subsequent iodimetric titration. The determination of N_2O necessitates prior decomposition of N_2O at 700° to 800°. In this case only about 90% recovery is obtained compared with 100% by the freezing-out method.

D. F. PHILLIPS

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New methods in gas analysis. II. Titrimetric analysis of gas mixtures. E. Schulek and E. Pungor (L. Eötvös-Univ., Budapest). *Mikrochim. Acta* 1950, 1120-35; cf. *C.A.* 50, 9231*d*.—Two procedures are given for detg. O in gas mixts. For higher contents the O is made to combine with MnO at 200-250° and the higher oxide formed is detd. iodometrically. The second method is also based on the iodometric detn. of the Mn oxide. The detn. of N_2O_3, or of NO and NO_2, is also made with the aid of an iodometric titration. W. T. H.

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PUNGOR, E.

28. The role of flame temperature in the flame-photometric analysis of alkali metals. E. Pungor, A. J. Hegedüs, I. K. Thega and E. E. Zapp (Eötvös Univ., Budapest, Hungary). *Mikrochim. Acta*, 1956, (7-8), 1247-1263.—A detailed investigation into flame processes is described. It is shown that temperature plays the dominant role and that measurement of flame temperature is advantageous in establishing optimum atomisation and combustion conditions. Stainless-steel atomising burners having easily interchangeable nickel capillaries are recommended and the atomisation should take place as close to the flame as possible. Prism or grating instruments are preferable to those in which filters are used. Lithium and Na are only slightly ionised in the oxy-hydrogen flame and in consequence there is no mutual interference in the determination of these elements, nor does their presence cause interference with the determination of K, Rb or Cs. On the other hand, K, Rb and Cs undergo considerable ionisation in the oxy-hydrogen flame, resulting in increased emission of these elements and hence considerable interference with one another. This can be largely overcome by mixing about 50% of N with oxy-hydrogen which reduces the flame temperature by > 1000° without disturbing the other parameters. The loss of sensitivity thereby experienced is not considered to be serious in view of the generally high sensitivity of flame-photometer methods.

D. F. PHILLIPS

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PUNGOR, E.

16. **Manganese (II) carbonate and some of its valuable properties for gas analysis.** E. Schulek and E. Pungor (Eötvös Univ., Budapest, Hungary). *Mikrochim. Acta*, 1956, (7–8), 1116–1119.—*Preparation of reagent*—Dissolve $MnCl_2.4H_2O$ (25 g) in H_2O (50 ml). Pour into a filtered soln. of $NaHCO_3$ (20 g) in H_2O (200 ml). Filter off the ppt. of $MnCO_3.2H_2O$; wash it with H_2O and then with 98% alcohol (× 3 or 4). Dry under air suction and remove the last traces of H_2O and alcohol with pentane. This prep. remains stable for 12 to 14 days. Water of crystallisation is lost at 70° to 100°, and at 250° to 300° pale-green MnO is formed. This is characterised by its ready absorption at 200°, not only of O, but also of gases that readily release O (NO, NO_2). At 450° to 500°, N_2O is absorbed. Thus the prep. may be utilised in gas analysis (*Anal. Abstr.*, 1957, 4, 16) for the removal of traces of O from a number of gases, *e.g.*, N and H. The surface area may be advantageously increased by mixing the $MnCO_3.2H_2O$ with glass grit that has first been heated with HCl and then dried after washing with alcohol and pentane.

D. F. PHILLIPS

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PUNGOR, E.

2076. New methods of gas analysis. III. Physical and chemical properties of alcohol-water systems. E. Schulek, E. Pungor and I. Trompler (Eötvös Univ., Budapest, Hungary). *Mikrochim. Acta*, 1957, (1), 85–95 (in German).—Measurements are reported of tension, viscosity and other physical constants of various alcohol - water systems. From these results and from literature data it is concluded that the deviations from ideal conditions that were found are functions of molecular arrangement, and that molecular arrangement varies with component concn. D. F. PHILLIPS

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PUNGOR, E.

2908. Flame-photometric determination of small traces of barium in material containing barium sulphate. E. Pungor and E. E. Zapp (Eötvös Univ., Budapest, Hungary). *Mikrochim. Acta*, 1957, (2), 150–158.—A new procedure for decomposing $BaSO_4$ is described. Decomposition is accomplished with the aid of fluorosilicic acid generated *in situ* with the sample from SiO_2 and HF. The resulting H_2SO_4 is reduced with HI. When disintegration of $BaSO_4$ is complete, the Ba is converted into $BaCO_3$ in the presence of oxalic acid. *Procedure*—Weigh a sample containing 10 to 20 mg of $BaSO_4$ into a platinum crucible. Add SiO_2 (50 mg) which has been purified several times by heating with HCl, HI (70%) (3 ml), HF (40%) (3 ml) and oxalic acid (0·5 g). Evaporate to dryness on a water bath and add HI (3 ml) and HF (3 × 3 ml). Re-evaporate to dryness and heat at 200° to 300° on a sand bath for 30 min. and then dissolve the contents of the crucible in HCl (20%), with heating. The barium content of the resulting soln. is determined by flame photometry, with a Beckman flame photometer, at 870 mμ. A linear calibration graph is obtained provided that the photometer is operated without an extraction duct. The most favourable concn. range of Ba lies between 10^{-4} and 10^{-3} mole per litre. As traces of H_3PO_4 cause suppression of the Ba emission in the flame, it is recommended that HI free from H_3PO_4 be used.

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An addition of a soln. containing 2×10^{-2} mole of Al per litre is made to both sample and standard soln. in order to even out effects on Ba emission caused by variable contents of Al present in the samples. On the mean of duplicate determinations the range of single results does not in general exceed ± 3% of the content of Ba (13 samples). The mean error of a single result is 2·1%, and the error of the mean of duplicates is 0·43%. The method has been employed on about 400 samples of silicate rock containing barium sulphate.

D. F. PHILLIPS

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Pungor, E.

K-8

HUNGARY/Optics - Optical Methods of Analysis

Abs Jour : Ref Zhur - Fizika, No 4, 1958, No 9554

Author : Punger, E., Konkoly Thege I.
Inst : L. Eötvös University, Budapest, Hungary
Title : Investigation of Compounds of Magnesium by Means of a Flame Photometer

Orig Pub : Acta chim. Acad. sci. hung., 1957, 11, No 1-2, 23-43

Abstract : The authors investigate the problem of the possibility of determining magnesium in solutions of its compounds by using the flame photometry method using the emission molecular bands. It is noted that the presence of various anions and cations in the solution interferes with the determination of the magnesium. It is therefore recommended to work where possible with standard solutions, whose composition is close to those investigated. In those cases when this cannot be done, it is proposed to introduce into the sample solutions and into the standards a certain one anion in large concentration; this leads to the suppression of the interfering action of the other anions. In particular, it is convenient to work with

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PUNGOR, E.

HUNGARY / Analytic Chemistry. General Topics. E

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60555.

Author : ~~E. Pungor.~~
Inst : Academy of Sciences of Hungary.
Title : Adsorption of Related Ions on Silver Iodide Surface.

Orig Pub: Acta chim. Acad. sci. hung., 1957, 12, No 3-4, 265-273.

Abstract: The argentometric determination of iodides in the presence of chlorides was studied by the potentiometric methods with the application of the indicator n-ethoxychrysoidine. It is shown that the indicator color change on the AgI surface is possible only, if the adsorbed and easily polarized

Card 1/2

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K-8

HUNGARY/Optics - Optical Methods of Analysis

Abs Jour : Ref Zhur - Fizika, No 11, 1958, No 26427

Author : ~~Fungor E.~~, Konkily Thego I.
Inst : L. Eotvos University, Budapest, Hungary
Title : Study of Molecular Band Emission Spectra With the Aid of a Flame Photometer. I. Properties of Copper Salts During Flame Photometry.

Orig Pub : Acta chim. Acad. sci. hung., 1957, 13, No 1-2, 1-7

Abstract : An investigation was made of the influence of different anions on the intensity of radiation of the molecular spectrum of copper oxide in a hydrogen-oxygen flame. Molar solutions of sulfuric, hydrochloric, and acetic acids were introduced into the flame, with addition of $CuSO_4 \cdot 5H_2O$ slats, the concentration of which in all solutions was 5×10^{-2} mole/liter. The presence of sulfuric acid causes a considerable reduction in the entire radiation in thevisible region, including the maximum at 538 millimicrons. Acetic acid causes a sharp increase in radiation. Acetic acid causes a sharp increase in radiation.

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PUNGOR, E.

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ACTA CHIMICA
Academiae Scientiarum Hungaricae
Vol 13, Nrs 1-2, 1957

INVESTIGATION BY FLAME PHOTOMETRY OF EMISSIONS MEASURED IN MOLECULE BANDS, I

Flame photometric properties of copper salts

E. PUNGOR and I. KONKOLY THEGE

(Institute of Inorganic and Analytical Chemistry, L. Eötvös University, Budapest)

Received October 26, 1955

Summary

Investigations of the behaviour of copper salts in flame photometry showed the action of different anions on the molecular emission band of copper oxide. Investigations were also carried out in the presence of various alcohols. The results obtained are interpreted with the use of the theory on the processes occurring in flame photometry earlier evolved by the authors.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, E.

"Dielectric mass methods for qualitative analysis and for structural determinations" by Friedrich Oehme. Reviewed by E. Pungor. Acta chimica Hung 38 no.2:172-173 '63.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

HUNGARY/Optics - Optical Methods of Analysis K-8

Abs Jour : Ref Zhur - Fizika, No 11, 1958, No 26438

cated that the choice of methyl alcohol, made by Dean and Thompson (Referat Zhur Fizika, 1956, No 2, 5449) is not suitable, since the concentrationof the latter affects the results of the measurement. Data are given on the influence of the following anions: HCl and H_2SO_4, in molar concentrations, do not influence the intensityof radiation. HJO_4 increases the intensity of radiation of boric acids, while NaOH decreases it. Problems of elimination of interference in quantitative flame analysis are discussed.

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PUNGOR, ERNO

Distr: 4E4j

Reaction mechanism of Metanil Yellow. Ernő Pungor and Erzsébet Hollós (Eötvös Loránd Tudományegyetem Szervetlen és Analitikai Kémiai Intézete, Budapest). *Magyar Kém. Folyóirat.* 63, 28-32(1957).—The reaction mechanism of Metanil Yellow that was suggested by Kolthoff (*C.A.* 21, 2628) and Bornár and Murgul (*C.A.* 52, 2642*f*) as an adsorption indicator can be treated like *p*-ethoxychrysoidine and the Fajan's indicators. In neutral medium with an excess of Ag the Ag salt of Metanil Yellow is formed. Its red color indicates the end point. In acid medium there is an acid-base indication that is due to the imino group of the dye and depends on the surface charge. The reaction mechanism of Metanil Yellow may, therefore, be explained with the help of the Schulek-Pungor theory on adsorption indicators.

Walter Wagner

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

Pungor, Erno

F

HUNGARY / Laboratory Equipment. Apparatus, Their Theory, Construction and Application.

Abs Jour : Referat. Zhurnal Khimiya, No 4, 1958, 11149.

Author : Erno Pungor.

Inst : Not given

Title : Simple Equipment for High Frequency Titration.

Orig Pub : Magyar Kem. folyoirat, 1957, 63, No.4-5, 149 - 151.

Abstract : The equipment for high frequency titration consisting of an one-tube ultrahigh frequency generator is designed mainly for acid-basic titration. The principle of the equipment action is based on the change of the contour quality factor at the electrical conductivity change of the titrated solution placed in the contour field. The

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[illegible]ON, [illegible], [illegible].

Determination of a small amount of barium is a substance containg barium sulfate by flame photometry.

p. 188 (Magyar Kemiai Folyoirat) Budapest Vol. 63, no. 6/7 June/July 1957

SO: Monthly Index of East European Acessions (AEEI) Vol. 6, no. 11 November 1957

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, E.

5

7

New procedures in gas analysis. III. Physical and chemical properties of the alcohol-water system. E. Schulek, E. Pungor, and I. Trompler (L. Eötvös-Univ., Budapest). Mikrochim. Acta 1957, 85; cf. C.A. 50, 11172c.—MeOH- and EtOH-water systems were studied and their vapor pressures, μs, viscosities, etc., detd. Deviation from Raoult's law is a function of mol. arrangement, which, in turn, varies with concn. 31 references. Philip S. Baker

Chem

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, E

7

4

2053. A simple high-frequency titration apparatus. E. Pungor and K. Huber (Inst. für anorg. und anal. Chem., L. Eötvös Univ., Budapest). Z. anal. Chem., 1957, 154 (1), 1-5.—The simple apparatus described is particularly suited to acid-base titrations. The apparatus works on the principle of

Phys. Chem.

change in circuit Q-factor by change in conductivity of the soln. titrated. A circuit diagram and experimental curves are given. M. F. C. LADD

PM aaz

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, E.

Flame photometric determination of small amounts of barium in samples containing barium sulfate. E. Pungor and E. E. Zapp (L. Eötvös Univ., Budapest). ~~Mikrochim. Acta~~ 1957, 150(in German).—$BaSO_4$ is decompd. to $BaSiF_6$ and H_2SO_4 with H_2SiF_6, the H_2SO_4 is removed by reduction to SO_2 with HI, and the $BaSiF_6$ is converted to $BaCO_3$ in the presence of $H_2C_2O_4$. The resulting $BaCO_3$ is finally dissolved in HCl and the Ba detd. by flame photometry. The error for the method is about 3%. Philip S. Baker

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

E. Pungor

Simple high-frequency titration apparatus. E. Pungor and K. Huber (Eötvös Univ., Budapest). Z. anal. Chem. 154, 1-5(1957).—A circuit, based on frequency changes measured by grid currents, is described for the high-frequency titration of 0.1-0.01N acids and bases.
K. G. Stone

4

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, E.

Gas analysis. IV. Microchemical vapor pressure measurement of phenol. E. Schulek, E. Pungor, and I. Trompler (L. Eösvös-Univ., Budapest, Hung.). *Mikrochim. Acta* 1958, 52-9; cf. *C.A.* 51, 11174*c*.—A previously described app. was used in the detn. of the vapor pressure of pure phenol and of the phenol above phenol-water mixts. between 50 and 70°. The deviation from the av. result was ±1 to 2%. The findings relating to pure phenol are compared with those obtained by Kahlbaum (*Z. physik. Chem.* (Leipzig) 26, 603(1898)) on a phys. basis. The results were in every case greater than Kahlbaum's. The percentage of difference decreased as the exptl. temp. was increased.

H. W. Harvey

SB 1/1

2 may

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E. Pungor

4
2 May

Quadrivalent chromium properties. E. Pungor and J. Trompler (L. Eötvös Univ., Budapest, Hung.). J. Inorg. & Nuclear Chem. 7, 412-17(1958)(in German).—Trimerization of Cr(IV) influences the disproportionation rate and interferes with both detn. and calcn. of the Cr(IV) absorption spectrum.
Jack J. Bulloff

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

Country : HUNGARY E
Category: Analytical Chemistry. General.

Abs Jour: RZhKhim., No 17, 1959, No 60428.

Author : Pungor, E.
Inst : -
Title : Progress in the Analyses Made With the Aid of Instruments
Orig Pub: Magyar kem. lapja, 1958, 13, No 3, 101-107

Abstract: Review. The bibliography includes 192 titles.
F. Sudakov

Card : 1/1

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

14. Following the adsorption of ions on a silver iodide surface by means of titration. (In German) E. Pungor, I. Konkoly Thege. Acta Chimica Academiae Scientiarum Hungaricae, Vol. 17, 1958, No. 1, pp. 113-117, 2 tabs.

The titration of iodide was examined in the presence of thiocyanate, sulphate and phosphate ions using adsorption indicators for end point indication. Excess consumption observed at these titrations proved to be suitable for calculating the radii of thiocyanate, sulphate and phosphate ions. The results show that thiocyanate ions, like haloid ions, are not absorbed as hydrates in contrast to "uncoated" sulphate and phosphate ions adsorbed in the form of hydrates.

[Retyped Clipped Abstract]

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, E.

Rapid determination of aluminum with high-frequency titration. E. Pungor and E. F. Zapp (L. Eötvös Univ., Budapest). *Egypt. J. Chem.* 2, 81-9(1959).—A high-frequency titrimeter, operating in the domain 130 Mc./sec., is used. The changes in Q, the factor of the oscillating circuit, are followed by measuring the grid current of the electron valve in the oscillator circuit. In this way, the app. records in the function of the real component of the complex resistance. The relation between the concn. and the deflection of the instrument gives a curve with a min. The highest sensitivity of the instrument is obtained at the points of inflection. Accordingly, the test soln. should be dild. prior to titration to such an extent that the measurements are carried out in the region of max. sensitivity. Standard solns. of $Ba(OH)_2$ and AcOH (both 0.1N) serve as titrants. The test soln., contg. 0.2-25 mg. of Al, is allowed to react with excess $Ba(OH)_2$; AcOH is used for back titration. The soln. of Al should not contain any CO_2.

H. ~~Sadek~~

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

Interhalogen complexes in aqueous solution. E. Pungor, K. Burger, and E. Schulek (L. Eötvös Univ., ~~Budapest~~, Hung.). *J. Inorg. & Nuclear Chem.* 11, 56-61(1959).—Ultraviolet absorption and oxidn.-redn. measurements of BrCl in aq. HCl indicates presence of $BrCl_4^-$ with stability const. of $2.6 \pm 1.0 \times 10^3$. Similar ICl_4^- and IBr_4^- ions have consts. of, resp., $4.3 \pm 2.2 \times 10^3$ and $5.0 \pm 1.0 \times 10^3$. I_3^- investigation was used as calibration.

Jack J. ~~Bulloff~~

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

[illegible], L.

Flame photometry; newer development in principles and measuring technique. p. [illegible].

[illegible]. Magyar Tudomanyos Akademia. Kozlemenyek Fizikai Tudomanyok Osztalya. Budapest, Hungary. Vol. 12 no. 2, 1959.

Monthly list of East European accession (EEAI) LC, Vol. ~~XXXXXXXXXXXXXXXXXXXX~~ 9, no. 2, Feb. 1960

Unclassified.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, E

Distr: 4E2c

Interhalogens. E. Schulek, E. Pungor, and K. Burger (L. Eötvös Univ., Budapest, Hung.). *Chem. zvesti* 13, 669-79(1959)(in German).—It was detd. that in an aq. medium the electroneg. part of the interhalogen compd. always participates in formation of halide complexes. It can be assumed that there is homolytic as well as heterolytic dissocn. of the interhalogen compd. The form of dissocn. or its degree is a function of the dielec. const. of the medium. The existence of halide complexes of interhalogen compds., esp. of BrCl, was proved. Jan ~~Micka~~

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1-Jag (NB)
1-Jgc (JD)
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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, E

Distr: 4E2c

New methods in research on complex halogen compounds. E. Pungor (L. Eötvös Univ., Budapest, Hung.). *Chem. szesz.* 13, 680-5(1959)(German summary).—Halogen-halogen, pseudohalogen-halogen reactions are described. Reactivity of these compds. depends on their complex forming properties. Statistical and kinematic methods are described. Good results were obtained for halogencyanides and some new compds. Jan Micka

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1-MSC(ID)
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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR E.

Distr: 4E3b

Investigation of halide complexes of interhalogen compounds. Erno Pungor, Kálmán Burger, and Elemér Schulek. *Magyar Kém. Folyóirat* 65, 301-5(1959).—Halide complexes of interhalogen compds. were investigated. The central Br atom in the chloride complex of BrCl has the coördination no. 6 and the formula $[Br(HCl)_6]^+$; its stability const. is $2.6 \pm 1.0 \times 10^2$. The central I atom in the chloride complex of ICl has the coördination no. 6, the formula $[I(HCl)_6]^+$, and a stability const. of $4.3 \pm 2.2 \times 10^2$. The central I atom in the bromide complex of IBr has a coördination no. of 4, the formula $[I(HBr)_4]^+$, and a stability const. of $5.0 \pm 1.0 \times 10^2$. Results of investigations of the triiodide complex verified the existence of the presumed complexes. G. Barkl

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno

New results in instrumental analysfs. Magy kem lap 15 no.3:133-135 Mr '60.

1. Eotvos Lorand Tudomanyegyetem Szervetlen es Analitikai Kemiai Intezete, Budapest.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno, dr.; ROKOSINYI-HOLLOS, Frau E.

On the possibility of determining polarographically by catalysis the dissociation constant of organic compounds containing oxygen. Acta chimica Hung 22 no.1:69-72 '60. (EEAI 9:9)

1. Institut fur Anorganische und Analytische Chemie der L.Eotvos Universitat, Budapest.
(Dissociation) (Organic compounds) (Oxygen)
(Polarograph and polarography) (Catalysis)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

[illegible], F.; [illegible], K.; SCHULEK, E.

Investigation of [illegible]atogenide complexes of interhalogen compounds. p. 301.

MAGYAR KEMIAI FOLYOIRAT. (Magyar Kemikusok Egyesulete) Budapest, Hungary
Vol. 65, no. 8, Aug. 1960

Monthly List of East European Accession (EEAI), LC, Vol. 9, no. 2, Feb. 1960

Uncl.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno; BALAZS, Lorand

Concentrating measuring limits of high-frequency titrimeters functioning around 130 Mc/s frequency range. Magy kem folyoir 66 no. 4:128-131 Ap '60.

1. Eotvos Lorand Tudomanyegyetem Szervetlen es Analitikai-Kemiai Intezete, Budapest.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno; HANGOSNE MAHR, Magdolna

Effect of viscosity of solutions on the pulverization conditions in flame photometric analyses. Magy kem folyoir 66 no.12:516-518 D '60.

1. Eotvos Lorand Tudomanyegyetem Szervetlen es Analitikai Kemiai Intezete es Orszagos Onkologiai Intezet.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno; WESZPREMY, Barna; KOVACSNE PALYI, Marta

Investigations by a Zeiss flame photometer equipped with a fog chamber. Magy kem folyoir 66 no.12:518-520 D '60.

1. Eotvos Lorand Tudomanyegyetem Szervetlen es Analitikai Kemiai Intezet, Budapest, es Csepel Vas- es Femmuvek Kozponti Anyagvizsgalo Loboratoriuma, Budapest.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno; KONKOLY THEGE, Ilona

Characteristics of transition elements from the point of view of flame photometry. Magy kem folyoir 66 no.12:520-522 D '60.

1. Eotvos Lorand Tudomanyegyetem Szervetlen es Analitikai Kemiai Intezete, Budapest.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno; ZAPP, Erika

Examination of alkaline metal impurities in metal aluminum with the aid of flame photometry. Magy kem folyoir 66 no.12:523-525 D '60.

1. Eotvos Lorand Tudomanyegyetem Szervetlen es Analitikai Kemiai Intezete, Budapest.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno; ZAIP, Erika Eva

Quick determination of aluminum contents by high-frequency titration. Magy kem folyoir 65 no. 11:436-439 N '59.

1. Eotvos Lorand Tudomanyegyetem Szervetlen-es Analitikai-Kemiai Intezete, Budapest.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

SCHNEER, Anna, a kemiai tudomanyok kandidatusa (Budapest); PROSZT, Janos; PUNGOR, Erno, a kemiai tudomanyok doktora (Budapest); SZARVAS, Pal, a kemiai tudomanyok kandidatusa

An account of the 1959 work of the Committee of Inorganic and Analytical Chemistry, Hungarian Academy of Sciences. Kem tud kozl MTA 15 no.3:375-395 '61.

1. Magyar Tudomanyos Akademia Szervetlen es Analitikai Kemiai Bizottsag, Budapest (for Schneer) 2. Szerkesztobizottsagi tag, Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalyanak Kozlemenyei and lev.tag (for Proszt) 3. Eotvos Lorand Tudomanyegyetem Szervetlen Kemiai Tanszek, Budapest (for Pungor)

(Hungarian Academy of Sciences)
(Hungary—Chemistry, Inorganic)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno, dr. (Budapest VIII Muzeum korut 4/b); KONKOLY THEGE, Ilona (Budapest VIII Muzeum korut 4/b)

Data on the flame photometric determination of the effect of alcohol.
Acta chimica Hung 28 no.1/3:125-132 '61.
(EEAI 10:9)

1. Institut fur Anorganische und Analytische Chemie der L. Eotvos Universitat, Budapest.

(Flame) (Alcohols)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno,dr. (Budapest); KONKOLY THEGE, Ilona (Budapest)

Atom absorption investigations with sodium. Acta chimica Hung 28 no.1/3:133-139 '61. (KEAI 10:9)

1. Institut fur Anorganische und Analytische Chemie der L. Eotvos Universitat, Budapest.

(Atoms) (Absorption) (Sodium) (Alcohols)
(Anions)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno; FARSANG, Gyorgy

Investigations in the field of polarographic catalytic hydrogen waves. I. Dependence of the height of catalytic waves on the dilution of buffer applied. Magy kem folyoir 67 no.7:293-297 Jl '61.

1. Eotvos Lorand Tudomanyegyetem Szervetlen es Analitikai Kemiai Tanszeke, Budapest.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno; FARSANG, Gyorgy

Investigations in the field of polarographic catalytic hydrogen waves. II. Dependence of catalytic hydrogen waves on the concentration of electrolytes which are present as non-buffer components in solutions. Magy kem folyoir 67 no.8:325-327 Ag '61.

1. Eotvos Lorand Tudomanyegyetem Szervetlen es Analitikai Kemiai Tanszeke, Budapest

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno; FARSANG, Gyorgy

Effect of the presence of tetraethylammonium salts on the catalytic current of organic compounds in case of systems which do not contain cobalt. Magy kem folyoir 67 no.8:328-330 Ag '61.

1. Eotvos Lorand Tudomanyegyetem Szervetlen es Analitikai Kemiai Tanszeke, Budapest

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

H/005/61/000/008/001/004
D232/D304

AUTHORS: Farsang, György and Jungor, Ernő

TITLE: Polarographic analysis of aluminum alloys

PERIODICAL: Magyar kémiai folyóirat, no. 8, 1961, 344-346

TEXT: The article presents a new method of polarographic analysis for determining heavy metal components of aluminum alloys, developed by the authors. The advantage of this method is that the analysis of various components is carried out from the same solution with satisfactory accuracy. Rochelle salt alkalized with ammonium, as used by the authors, was found suitable for determining copper, nickel, zinc, manganese and iron separately in the presence of aluminum. The accuracy of the method was proved by analyzing a solution having the components of a known alloy. The polarogram was recorded with a Radelkisz 7-77-4 device. Electrolysis was carried out in a Novak container. The results of the experimental analysis are shown in Table 1.

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D232/D304

Polarographic analysis...

Table 1

A. Given weight of component in mg
B. 0.50 Ni (in non-cyanide medium)
C. 1.00 Ni (in cyanide medium)
D. Analyzed weight of component in mg

1. táblázat

Bemért Me. mg A	Talált Me. mg D	Δ%
0,50 Cu	0,51	+2
	0,51	+2
	0,50	0,0
0,50 Ni (nem cianidos közegben) B	0,50	0,0
	0,52	+4
	0,53	+6
1,00 Ni (cianidos közegben) C	1,00	0,0
	0,99	—1
	0,98	—2
0,50 Zn	0,53	+6
	0,53	+6
	0,50	0,0
0,50 Mn	0,52	+4
	0,50	0,0
	0,47	—6
0,50 Fe	0,52	+4
	0,49	—2
	0,51	+2

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Polarographic analysis... H/005/61/000/008/001/004
D232/D304

There are 3 figures, 1 table and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: I.M. Kolthoff and G. Matsuyama: Ind. Eng. Chem. Anal. Ed., 17, 615, 1945; J.V.A. Novak: Coll. of Czech. Chem. Communs., XII, No. 4-5, 1947. [Abstracter's note: The references are given as footnotes on first page of the article].

ASSOCIATION: Eötvös Loránd tudományegyetem szervetlen—és analitikai-kémiai tanszéke (Department of Inorganic and Analytical Chemistry of the "Eötvös Loránd" University of Sciences) Budapest.

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PUNGOR, Erno

"Instruments of chemical analysis" by Gyula Strub. Reviewed by Erno Pungor. Magy kem folyoir 67 no.8:370 Ag '61.

1. Eotvos Lorand Tudomanyegyetem Szervetlen es Analitikai Kemiai Tanszeke, Budapest.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

BALAZS, Lorant; PUNGOR, Erno

Application of methyl glucamine as volumetric solution in acid determinations performed by high-frequency end point indication. Magy kem folyoir 67 no.9:395-397 S '61.

1. Eotvos Lorand Tudomanyegyetem Szervetlen es Analitikai Kemiai Tanszeke, Budapest.

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BECK, Mihaly; BITE, Pal; BRUCKNER, Gyozo; CSENTES, Jozsef; CSUROS, Zoltan; DEAK, Gyula; ERDEY-GRUZ, Tibor; ERDEY, Laszlo; FABIAN, Pal; FINALY, Istvan; FODOR, Gabor; FODORNE CSANYI, Piroska; GYORBIRO, Karoly; INZELT, Istvan; KUCSIAN, Arpad; NEUMANN, Erno; PUNGOR, Erno; SCHNEIER, Anna; SCHULEK, Elemer; SZABADVARY, Ferenc

Rules for the Hungarian chemical nomenclature and orthography. Kem tud kozl MTA 17 no.1/4:1-292 '62.

1. "A Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalyanak Kozlemenyei" szerkeszto bizottsagi tagja (for Bruckner, Csuros, Laszlo Erdey, G.Fodor, and Schulek). 2. "A Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalyanak Kozlemenyei" szerkesztoje (for Erdey-Gruz). 3. "A Magyar Tudomanyos Akademia Kemiai Tudomanyok Osztalyanak Kozlemenyei" technikai szerkesztoje (for Finaly). 4. Muvelodesugyi Miniszterium (for Csentes). 5. Magyar Tudomanyos Akademia Helyesitasi Bizottsage (for Fabian). 6. Nehezipari Miniszterium (for Neumann).

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno; KOVACS, Odon

An account of the 1961 ACHEMA exhibition. II. Devices of chemical and physico-chemical analysis. Magy kem lap 17 no.5:227-232 My '62.

1. Eotvos Lorand Tudomanyegyetem Szervetlen es Analitikai Kemiai Intezete (for Pungor). 2. Szegedi Tudomanyegyetem Szerves Kemiai Intezete (for Kovacs).

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno

Hungarian-made oscillometric titrimeters. Magy kem lap 17 no.8:357-359 Ag '62.

1. Eotvos Lorand Tudomanyegyetem Szervetlen es Analitikai Kemiai Intezete.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno

"Tools of instrumental analysis in chemistry" by Gyula Straub. Reviewed by Erno Pungor. Kem tud kozl MTA 18 no.1:162-163 '62.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001343610015-7

PUNGOR, Erno, a kemiai tudomanyok doktora

An account of my study trip to Poland and the German Democratic Republic. Kem tud kozl MTA 18 no.2:323-324 '62.

1. Eotvos Lorand Tudomanyegyetem Szervetlen es Analitikai Kemiai Tanszeke, Budapest.

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