บรรณานุกรม

1. อุตสาหกรรม, กระทรวง. กรมโลหกิจ. ดีบุก หน้า 1, 207. กรุงเทพมหานคร : กรมโลหกิจ, 2506.

2. Hampel, C.A. The Encyclopedia of the Chemical Elements. pp. 412-772, New York : Reinhold Book Corporation, 1965.

3. Belcher, R., and Gordon, L. International Series of Monographs on Analytical Chemistry : Analytical Chemistry of Niobium and Tantalum. Vol.6, pp. 1-9. Oxford : Pergamon Press, 1964.

4. Kolthoff, I.M. et al. Treatise on Analytical Chemistry. Vol.6, pp. 188-277. New York : Interscience Publishers, 1966.

5. Clark, R.J.H. The Chemistry of Titanium and Vanadium. pp. 1-17. Asmterdam, The Natherlands : Elsevier Publishing Company, 1968.

6. Elwell, W.T., and Wood, D.F. Analytical Chemistry of Molybdenum and Tungsten. pp. 1-11. Oxford : Pergamon Press, 1971.

7. Hillebrand, W.F., and Lundell, G.E.F. Applied Inorganic Analysis. 2d ed. pp. 588-610. New York : Wiley, 1953.

8. Huffman, E.H. et al. "Anion Exchange of Zirconium, Hafnium, Niobium and Tantalum in Hydrochloric Acid Solutions." Journal of The American Chemical Society. 73 (September 1951) : 4474.

9. Faris, J.P. "Absorption of the Elements from Hydrofluoric Acid by Anion Exchange." Analytical Chemistry 32 (April 1960) : 520-522.

18. Schäfer, H., and Schulte, C.F. Z.Anal. Chem. 149,(1956) : 73

19. Hunt, E.C., and Wells, R.A. "The Absorptiometric Determination of Niobium and Tantalum with Pyrogallol." Analyst 79 (June 1954) : 345-350.

20. Dinnin, J.I. "Ultraviolet Spectrophotometric Determination of Tantalum with Pyrogallol." Analytical Chemistry 25 (December 1953) : 1803-1807.

21. McKaveney, J.P. "Direct Spectrophotometric Determination of Niobium, Titanium and Tungsten with Hydroqui none Using Background Correction Technique." Analytical Chemistry 33 (May 1961) : 744-747.

22. Motojima, K., and Hashitani, K. "Spectrophotometric Determination of Niobium and Molybdenum with 8-Quinolinol in Uranium-Base Alloy," Analytical Chemistry 33 (January 1961) : 48-52.

23. Naidu, P.P., and Rao, G.G. "Difference Spectrophotometric Determination of Micro Amounts of Metal Ions in Mixture." Microchem Journal. 18 (April 1973) : 520-528.

24. Nicol, A.W., Physioochemical Methods of Mineral Analysis. pp. 88-150. New York : Plenum Press, 1975.

25. Knowles, H.B., and Lundell, G.E.F. "Volumetric Determination of Columbium." Journal of Research of the National Bureau of Standard. 42 (April 1949) : 405-408.

26. Jimenez Sece, J.L.,et al. "Determination of Niobium and Tantalum in Aluminosilicate Minerals by Emission Spectrography." Analytical Abstract 26 (No.2 1976):799.

10. Kraus, K.A., and Nelson, F. American Standard of Testing Material No.195. New York : Spec. Tech. Publ., 1958.

11. Kraus, K.A., and Moore, G.E. "Anion Exchange Studies, III. Protactinium in Some HCl-HF Mixture : Separation of Niobium, Tantalum and Protactium." Journal of American Chemical Society 73 (June 1951) : 2900.

12. Kraus, K.A., and Moore, G.E. "Separation of Columbium and Tantalum with Anion Exchange Resins." Journal of American Chemical Society 71 (November 1949) : 3855.

13. Hague, J.L., and Machlan, L.A. "Determination of Titanium, Zirconium, Niobium and Tantalum in Steels : Separation by Anion Exchange." Journal of Research of The National Bureau of Standard 62 (January 1959) : 11-19.

14. Wilkins, D.H. "The Separation and Determination of Nickel, Chromium, Cobalt, Iron, Titanium, Tungsten, Molybdenum, Niobium and Tantalum in High Temperature Alloy by Anion Exchange," Talanta 2 (April 1959) : 355-360.

15. Bandi, W.R., Buyok, E.G., and Melnich, L.M. "Anion Exchange Separation of Zirconium, Titanium, Niobium, Tantalum, Tungsten and Molybdenum." Analytical Chemistry 33 (August 1961) : 1275-1278.

16. Ellenberg, J.Y., Ledolicotte, G.W., and Moore, F.L. "Separation of Niobium and Tantalum by Liquid Extraction." Analytical Chemistry 26 (June 1954) : 1045-1046.

17. Stevenson, P.C., and Hicks, H.G. "Separation of Tantalum and Niobium by Solvent Extraction." Analytical Chemistry 25 (October 1953) : 1517-1519.

27. Djjosubroto, et al. "Determination of Vanadium, Zirconium Hafnium and Tantalum in Tin Ores by Neutron Activation Analysis." Radiochem. radioanalyt. Letter. 14 (1973) 257-263.

28. Grimshaw, R.W., and Harland, C.E. Ion-exchange : Introduction to Theory and Practice. London : The Chemical Society, 1975.

29. BDH Chemical Ltd. Laboratory Chemical 1975/6, Export edition. pp. 156-162. England : BDH Chemical Ltd., 1975/6.

30. Salmon, J.B., and Hale, D.K. Ion Exchange A Laboratory Mannual. pp. 34-36. London, Butterworths : Scientific Publications, 1959.

31. Mohsin, Q., Rathore, H.S., and Kaushik, R.C. "Cation and Anion Exchange Studies of Twenty Cations in Aqueous Solutions of Formic, Oxalic, Tartaric, and Citric Acids." Analytical Chemistry 47 (August 1975) : 1710-1712.

32. Dean, J.A. Chemical Separation Methods. pp. 98-100. New York : D. Van Nostrand Company, 1969.

33. Fritz, F.S. and Pietrzyk, D.J. "Non-Aqueous Solvents in Anion Exchange Separation." Talanta 8 (1961) : 143-162.

34. Brady, G.S., Material Handbook. 9th ed. pp. 693 New York : McGraw-Hill Book Co., 1963.

35. Varian Techtron Pty. Ltd., Instruction Mannual for Varian Techtron Model AA-5 Atomic Absorption Spectrophotometer. Appexdix 1 Australia : Varian Techtron Pty. Ltd., 1971.

36. Fine, S., and Hendee, C.E. X-ray Critical Absorption and Emission Energies in keV. New York : Mc Graw-Hill Publication, 1955.

37. Marzys, A.E.O. "Simultaneous Absorptionmetric Determination of Tantalum and Niobium in Ores." Analyst 80 (March 1955) : 194-203.

ประวัติผู้เขียน

นางอรุณี กงศักดิ์ไพศาล เกิดเมื่อวันที่ 1 กันยายน พ.ศ.2493 กรุงเทพมหานคร วุฒิการศึกษา ปริญญาวิทยาศาสตรบัณฑิต (เคมี) จุฬาลงกรณ์มหาวิทยาลัย พ.ศ.2516 เป็นอาจารย์ระดับ 3 ภาควิชาคณิตศาสตร์และวิทยาศาสตร์ คณะครุศาสตร์อุตสาหกรรมและวิทยาศาสตร์ สถาบันเทคโนโลยีพระจอมเกล้าวิทยาเขตเจ้าคุณทหาร – ลาดกระบัง การวิจัยนี้ได้รับทุนจากบัณฑิตวิทยาลัย