

## BIBLIOGRAPHY

1. Hiderbrand, D.C. and White, D.H. "Trace Element Analysis in Hair: An Evaluation." Clin. Chem. 20(2), (1974): 148-151.
2. Bowen, H.J.M. and Gibbons, D. in Radioactivation Analysis, Clarendon Press, Oxford, 1963.
3. IAEA Advisory Group "Report of the Advisory Group on the Applications of Nuclear Methods in Environmental Research." IAEA/AG-53, International Atomic Energy Agency, Vienna, 1976.
4. Leon, N.H. "Structural Aspects of Keratin Fibres." J. Society of Cosmetic Chemists 23(1972): 427-445.
5. Fraser, R.D.B. "Keratins." Sci. Amer. 222(1969): 87-96.
6. Hopps, H.C. "The Biological Bases of Using Hair and Nail for Analyses of Trace Elements." Sci. Total Envir. 7(1977): 71-89.
7. Montagna, W. and Ellis, R.A. in Biology of Hair Growth, Academic Press, New York, 1958.
8. Kligman, A.M. "The Human Hair Cycle." J. Invest. Derm. 33 (1959): 307-316.
9. Davis, B.K. "Phases of the Hair-Growth Cycle." Nature 194 (1962): 694.
10. Ebling, F.J. "Hair." J. Invest. Derm. 67(1976): 98-105.

11. Sidey, A.K. and Wood, J.D. "Hair; A Monitor of Chemical Exposure and Disease." Chemistry International 6(1980): 12-15.
12. Valkovic, V. in Trace Elements in Human Hair. Garland STPM Press, New York & London, 1977.
13. Maes, D. and Pate, B.D. "The Spatical Distribution of Zinc and Cobalt in Single Human Head Hairs." J. Forensic Science 22(1977): 75-88.
14. Bate, L.C. and Dyer, F.F. "Trace Elements in Human Hair." Nucleonics 23(1965): 74-78.
15. Maes, D. and Pate, B.D. "The Spafical Distribution of Cu in Individual Human Hairs." J. Forensic Sci. 21(1976): 127-149.
16. Obrusnik, I., et al. "The Variation of Trace Element Concentrations in Single Human Head Hairs." J. Forensic Sci. 17(1972): 426-431.
17. \_\_\_\_\_ "The Variation of Trace Element Concentrations in Single Human Head Hairs." J. Radioanal. Chem. 15(1973): 115-134.
18. Vergnese, G.C., Kishore, R. and Guinn, V.P. "Differences in Trace Element Concentrations in Hair Between Males and Females." ibid : 329-335.
19. Renshaw, G.D., Pounds, C.A. and Person, E.F. "Variation in Pb Concentration along Single Hairs as Measured by

- Non-Flame AAS." Nature 238(1972): 162-163.
20. \_\_\_\_\_ "Determination of Pb and Cu in Hair by Non-Flame AAS." J. Forensic Sci. 18(1973): 143-151.
21. Valkovic, V., et al. "Variation in Trace Element Concentrations Along Single Hairs as Measured by Proton Induced X-Ray Emission Photometry." Nature 243(1973): 543.
22. Houtman, J.P.W., et al. "As Level of Human Hair as an Indicator for Environmental Exposure: A Case History." Symposium on Nuclear Activation Techniques in the Life Sciences IAEA-SM-227/21. International Atomic Energy Agency, Vienna, Austria, 1978.
23. Katsanos, A.A. and Hadjiantonon, A. "Health Related Monitoring of Trace Elements by PIXE." the IAEA First Research Co-ordination Meeting of the Agency Co-ordinated Research Programme on Nuclear Methods for Health-Related Monitoring of Trace Element Pollutants. Namur, Belgium, 31 August - 4 September 1981.
24. Forshufvud, S., Wassen, A. and Smith, H. "As Content of Napoleon's Hair Probably Taken Immediately after His Death." Nature 192(1961): 103-105.
25. \_\_\_\_\_ "Distribution of As in Napoleon's Hair." Nature 194(1962): 725-726.
26. Alder, J.F., Samuel, A. J. and West, T.S. "The Single Element Determination of Trace Metals in Hair by Carbon-

- Furnances Atomic Spectrometry." Anal. Chim. Acta.  
87(1976): 313-332.
27. Gordus, A.A. "Factors Affecting the Trace Metal Content of Human Hair." J. Radioanal. Chem. 15(1973): 229-243.
  28. Maes, D. and Pate, B.D. "The Absorption of As into Single Human Head Hairs." J. Forensic. 22(1977): 89-94.
  29. Kikkwa, Z., et al. "Nature Pigments Derived from Tyrosine and Tryptophan in Animals." Science 121(1955): 43.
  30. Cotzias, G.C., et al. "Manganese in Melanin." Nature 201 (1964): 1228.
  31. Kikkwa, Z., et al. "Further Studies on the Relation Between Metals and Natural Pigments." Science 128(1958): 1431.
  32. Schroeder, H.A. and Nason, A.P. "Trace Metals in Human Hair." J. Invest. Derm. 53(1969): 71-78.
  33. Eads, E.A. and Lambdin, C.E. "A Survey of Trace Metals in Human Hair." Environ. Res. 6(1973): 247-252.
  34. Ohmari, S., et al. "Nondestructive Multielementary Analysis of Human Hair by Neutron Activation." Radioisotopes 24(1975): 396-402.
  35. Imahori, A., et al. "Multielement Neutron Activation Analysis of Human Scalp Hair: A Location Population Survey in the Tokyo Metropolitan Area." J. Radioanal. Chem. 52(1), (1979): 167-180.

36. Terai, M., et al. "An Application of Neutron Activation Analysis to Biological Materials: II. The Comparison of Trace Element Contents in Normal and Diseased Infant Hairs." ibid : 143-152.
37. Kishore, R., Verghese, G.C. and Guinn, V.P. "Differences in Trace Element Concentrations in Hair Between Males and Females." J. Radioanal. Chem. 15(1973): 329-335.
38. EPA-600/4-79-049. Jenkins, Dale N. "Toxic Trace Metals in Mammalian Hair and Nails." Environment Monitoring and Support Laboratory Office of Research and Development U.S. Environmental Protection Agency, Las Vegas, Nevada, 1979.
39. Al-Shahristani, H. and Al-Haddad, I.K. "Mercury Content of Hair from Normal and Poisoned Person." J. Radioanal. Chem. 53(1973): 59-70.
40. Al-Shahristani, H. "Neutron Activation Analysis of Pollutants in Human Hair Using Research Reactors (Survey of Trace Elements in Hairs of Normal and Affected Iraqis) Symposium on Nuclear Activation Techniques in the Life Science. SM-227/7. International Atomic Energy Agency, Vienna, Austria, 22-26 May 1978.
41. Henley, E.C., et al. "Proton-Induced X-Ray Emission Analysis of Single Human Root Hairs." Science

197(1977): 277-278.

42. IAEA/RL/50. Ryabukin, Yu.S. (comp.) "Activation Analysis of Hair as an Indicator of Contamination of Man by Environmental Trace Element Pollutants." International Atomic Energy Agency, Vienna, Austria, 1978.
43. O Brunik, I., et al. "Instrumental Neutron Activation Analysis of Fly Ash, Aerosols and Hair." J. Radioanal. Chem. 54(1-2), (1979): 311-324.
44. Jervis, R.E. and Tiefenbach, B. "Arsenic Accumulation in Gold Smelter and Nearby Residence." Symposium on Nuclear Activation Techniques in the Life Science. SM-227/67. International Atomic Energy Agency, Vienna, Austria, 22-26 May 1978..
45. Wiesener, W., Goener, W. and Niese, S. "Changes of Trace Element Concentration in Hair and other Organs in Respect to Disease and Metal Burden." ibid
46. \_\_\_\_\_ "Neutron Activation Analysis of Hair Element-Influence, Occupation and Health Status." the IAEA First Research co-ordination Meeting of the Agency Co-ordinated Research programme on Nuclear Methods for Health-Related Monitoring of Trace Element Pollutants. Namur, Belgium, 31 August-4 September 1981.
47. Analytical Chemistry Division Bhabha Atomic Research Centre

- Trombay. Gangadharan, S. "Co-ordinated Programme on Neutron Activation Analysis of Pollutants in Human Hair Using Research Reactors: Particularities in the Hair Composition in a Group of Indian Residents and Analytical Aspects of Sampling and Treatment of Data (1976-1979)." Analytical Chemistry Division Bhabha Atomic Research Centre Trombay, Bombay, India, 1981.
48. Strain, W.H., et al. "Zn-65 in Human Hair." Nature 204(1964): 490-491.
49. Person, A.K., Velandia, I.A. and Dienes, M. "Forensic Aspects of Trace Element Variation in the Hair of Isolated Amazonas Indian Tribes." J. Forensic Sci. 22(1977): 95-105.
50. Al-Shristani, H., et al. "Mercury in Hair as an Indicator of Total Body Burden. Conf. on Intoxication due to Alkylmercury-Treated Seed. Baghdad, Iraq 9-13 Sept. 1974." Bull. World Health Org., Suppl. 53(1976): 105-112.
51. Hoode, D. and H.A. van der Sloot "Determination of Trace Elements in Human Hair: Preliminary Results." Chemic 78/8, Netherlands Energy Research Foundation, Netherlands, n.d.7.
52. Das, H.A., et al. "Instrumental Neutron Activation of Human Hair and Related Radiotracer Experiments on Washing and Leaching." Private Communication, Netherlands, 1980.

53. Chittleborough, G. "A Chemist's View of the Analysis of Human Hair for Trace Elements." Sci. Total Environ. 14(1980): 53-75.
54. Das, H.A. "The Development of a Fast and a Reliable Procedure for the Determination of Trace Elements in Human Head Hair by Neutron Activation Analysis." the IAEA First Research Co-ordination Meeting of the Agency Co-ordinated Research Programme on Nuclear Methods for Health-Related Monitoring of Trace Element Pollutants. Namur, Belgium, 31 August - 4 September 1981.
55. Kritalugsana, S., Sornmayura, S. and Pringsulaka, P. "Quantitative Determination of Pb in the Hair of Thai Children." Siriraj Hospital Gazette 25(1973): 749-750.
56. เปี่ยมศักดิ์ เมนะเศวต วรวิทย์ ชีวภรณ์วิวัฒน์ และมณี เศรษฐบุตร "การเปรียบเทียบปริมาณสารตะกั่วในเส้นผมของคนในชนบทกับคนในกรุงเทพฯ." วารสารวิทยาศาสตร์ 34(12), (ธันวาคม 2523): 1045-1052.
57. Benjanuvatra, N.K. and Bennion, M. "Hair Cr Concentration of Thai Subjects with and without Diabetes." Nutrition Reports International. 12(1975): 325-330.
58. Hambidge, K.M., et al. "Cr, Zn, Mn, Cu, Ni, Fe and Cd Concentrations in Hair of Residents of Chandigarh, India and Bangkok, Thailand." Trace Substances in Environmental Health. 8(1974): 39-44.
59. Gershoff, S.N., et al. "Nutrition Studies in Thailand: III. Trace Minerals in Human and Rat Hair."



Am. J. Clin. Nutrit. 30(1977): 868-872.

60. Suckcharoen, S. and Nuorteva, P. "Alarming Signs of Mercury Pollution in a Freshwater Area of Thailand." Ambio 7(3), (1978): 113-116.
61. Laul, J.C. "Neutron Activation Analysis of Geological Materials." At. Energy Rev. 17(3), (1979): 603-641.
62. Hendee, W.R. in Radioactive in Biological Research. Wiley-Interscience Publication John Wiley & Sons, New York, [n.d.].
63. Guinn, V.P. and Hosttle, J. "Neutron Activation Analysis in Elemental Analysis of Biological Materials." Technical Reports Series No. 197. pp. 105-140, International Atomic Energy Agency, Vienna, 1980.
64. Guinn, V.P. and Schmitt, R.A. "Determination of Pesticide Residues by Neutron Activation Analysis." Residue Review. 5(1964): 148-174.
65. Das, H.A., Faanhof, A. and H.A. van der Sloot "Errors in Instrumental Neutron Activation Analysis: I. Determination of the Peak Area." J. Radioanal. Chem. 54 (1-2), (1979): 289-301.
66. Arunchalam, J., Gangadharan, S. and Yegnasubramanian, S. "Elemental Data on Human Hair Sampled from Indian Student Population and Their Interpretation for Studies in Environmental Exposure." Symposium on

Nuclear Activation Techniques in the Life Science.

SM-227/24. International Atomic Energy Agency,  
Vienna, Austria, 22-26 May 1978.

67. Barker, D.H., et al. "Metal Concentration in Human Hair  
from India (Pilani, Rajasthan)." Trace Substance  
in Environmental Health. 10(1976): 71-81.

## VITA

Miss Suchit Wongboonsin was born on June 14, 1955 in Bangkok. She received her Bachelor Degree of Science (Chemistry) in 1979 in the Faculty of Science, Mahidol University. After her graduation, she was awarded a two years scholarship from the University Development Commission for her study towards the Master of Science degree.

