## **REFERENCES**

- Akter, K.F., Chen, Z., Smith, L., Davey, D. and Naidu, R. 2005. Speciation of arsenic in ground water samples: A comparative study of CE-UV, HG-AAS and LC-ICP-MS. *Talanta*. 68: 406-415.
- ATSDR (Agency for Toxic Substances and Disease Registry). 2000. Toxicological profile for arsenic. U.S. Department of Health and Human Services, Agency for Toxic Sustances and Disease Registry, Atlanta, GA.
- Berg. M., Tran, H.C., Nguyen, T.C. Pham, H.V., Schertenleib, R., Giger, W. 2001. Arsenic Contamination of Groundwater and Drinking Water in Vietnam: A Human Health. *Environmental Science and Technology*. 35:2621-2626.
- Bhumbla, D.K. and Keefer, R.F. 1994. Arsenic mobilization and bioavailibity in soils. In: Nriagu, J.O., editor. Arsenic in the environment. Part I: cycling and characterization. *Adv. Environ Sci.* 26: 51-82.
- B'Hymer, C. And Caruso, J.A. 2004. Arsenic and its speciation analysis using high-performance liquid chromatography and inductively coupled plasma mass spectrometry. *J. Chromatogr. A.* 1045: 1-13.
- Bowen, H.J.M. 1997. Environmental chemistry of the elements. London: Academic Press. 333.
- Buchanan, W.R. 1962. Toxicity of arsenic compounds. Elsevier Scientific Publishers. pp v-viii.
- Burguera, M. and Burguera, J.L. 1997. Analytical methodology for speciation of arsenic in environmental and biological samples. *Talanta*. 44: 1581-1604.

- Burguera, J.L., Burguera, M., Rivas, C. and Carrero, P. 1998. On-line cryogenic trapping with microwave heating for the determination and speciation of arsenic by flow injection/hydride generation/atomic absorption spectrometry. *Talanta*. 45: 531-542.
- Carrero, P., Malavé, A., Burguera, J.L., Burguera, M. and Rondón. 2001. Determination of various arsenic species by flow injection hydride generation atomic absorption spectrometry: investigation of the effects of the acid concentration of different reaction media on the generation of arsines. *Anal. Chim. Acta*. 438: 195-204.
- Cava-Montesinos, P., Nilles, K., Cervera, M.L. and Guardia, M. 2005. Non-chromatographic speciation of toxic arsenic in fish. *Talanta*. 66 (4): 895-901.
- Cavicchioli, A. La-Scalea, M.A. and Gutz, I.G.R. 2004. Analysis and speciation of traces of arsenic in environmental, food and industrial samples by voltammetry: a review. *Electroanalysis*. 16: 697-711.
- Cebrian, M.E., Albores, A., Aguilar, M., Blakely, E. 1983. Chronic Arsenic Poisoning in the North of Maxico. *Human Toxicology*. 2: 121-133.
- Cheng, Z., Zhang, L.L., Yang, F.S., Lu, Z.M., Zhang, X.L. 1998. The Epidemology and Control of Arsenicosis in China. *Journal of Chinese Endemic Disease Control*. 13:342-345.
- Choprapwon, C. 1995. Chronic Arsenic Poisoning in Ronpibool District, Nakorn Srithammarat Province, Southern Thailand: How Should We Balance Between Economics and Health. Second International Conference on Arsenic Exposure and Health Effects.

- Choprapwon, C. and Porapakkham, Y. 2001. Occurrence of Cancer in Arsenic Contaminated Area; Ronpibool District, Nakorn Srithammarat Province, Southern Thailand. *Arsenic Exposure and Health Effects IV*. 201-206.
- Chowdhury, U.K. 1999. The Condition of Arsenic Contamination of Underground Water and Prevalent of Arsenicosis in Residents in Bangladesh and West Bengal. Abstract Book of Pan-Asia Pacific Conference on Fluoride and Arsenic Research. Shengyang, China. August, 16-20.
- Coelho, N.M.M., Cósmen da Silva, A. and Moraes da Silva, C. 2002. Determination of As(III) and total inorganic arsenic by flow injection hydride generation atomic absorption spectrometry. *Anal. Chim. Acta* 460: 227-233.
- Cullen, W.R. and Reimer, K.J. 1989. Arsenic speciation in the environment. *Chem. Rev.* 89: 713-764.
- Ellwood, M.J. and Maher, W.A. 2003. An automated hydride generation-cryogenic trapping-ICP-MS system for measuring inorganic and methylated Ge,Sb and As species in marine and fresh waters. *J. Anal. At. Spectrom.* 17: 197-203.
- Ferreira, M.A. and Barros, A.A. 2002. Determination of As(III) and arsenic(V) in natural waters by cathodic stripping voltammetry at a hanging mercury drop electrode. *Anal. Chim. Acta* 459: 151-159.
- Frank, J., Krachler, M. and Shotyk, W. 2005. Direct determination of arsenic in acid digests of plant and peat samples using HG-AAS and ICP-SF-MS. *Anal. Chim. Acta*. 530: 307-316.
- Fergusson, J.E. 1990. The heavy elements: chemistry, environmental impact and health effects.

  Oxford: Pergamon Press. 614.

- Glaubig, R.A. and Goldberg, S. 1988. Determination of inorganic arsenic(III) and arsenic (III plus V) using automated hydride generation atomic absorption spectrometry. *Soil. Sci. Am. J.* 52: 536-537.
- Gómez-Ariza, J.L., Sánchez-Rodas, D.S., Giráldez, I. and Morales, E. 2000. A comparison between ICP-MS and AFS detection for arsenic speciation in environmental samples. *Talanta*. 51: 257-268.
- Gong, Z., Lu, X., Ma, M., Watt, C. And Le, X.C. 2002. Arsenic speciation analysis. *Talanta*. 58: 77-96.
- González, J.C., Lavilla, I. And Bendicho, C. 2003. Evaluation of non-chromatographic approaches for speciation of extractable As(III) and As(V) in environmental solid samples by FI-HGAAS. *Talanta*. 59: 525-534.
- Greulach, U. and Henze, G. 1995. Analysis of arsenic(V) by cathodic stripping voltammetry. *Anal. Chim. Acta.* 306: 217-223.
- Gurzau, E.S. and Gurzau, A.E. 2001. Arsenic in Drinking Water from Groundwater in Transylvania, Romania: An Overview. Arsenic Exposure and Health Effects IV. 181-184.
- Hansen, S.H., Larsen, E.H., Pritzal, G. and Cornett, C. 1992. Separation of seven arsenic compounds by high-performance liquid chromatography with on-line detection by hydrogen-argon flame atomic absorption spectrometry and inductively coupled plasma mass spectrometry. *J. Anal. At. Spectrom.* 7(4): 629-634.

- He, Y., Ramnarraine, M. and Locke, D. 2004. Differential pulse cathodic stripping voltammetric speciation of trace level inorganic arsenic compounds in natural water samples.

  \*\*Anal. Chim. Acta 511: 55-61.
- He, Y., Zheng, Y., Ramnaraine, M. and Locke, D.C. 2004. Differential pulse cathodic stripping voltammetric speciation of trace level inorganic arsenic compounds in natural water samples. *Anal. Chim. Acta* . 511: 55-61.
- He, Y., Zheng, Y. and Locke, D.C. 2007. Cathodic stripping voltammetric analysis of arsenic species in environmental water samples. *Microchem J*. 85(2): 265-269.
- Huerga, A., Lavilla, I. And Bendicho, C. 2004. Speciation of the immediately mobilisable As(III), As(V), MMA and DMA in river sediments by high performance liquid chromatography-hydride generation-atomic fluorescence spectrometry following ultrasonic extration. *Anal. Chim. Acta*. 534(1): 121-128.
- Hung, D.Q., Nekrassova, O. and Compton, R.G. 2004. Analytical methods for inorganic arsenic in water: a review. *Talanta*. 64: 269-277.
- IPCS (International Programme on Chemical Safety). 2001. Environmental health criteria 224.

  Arsenic and arsenic compounds (second edition). World Health Organization,

  Geneva.
- Kaise, T. and Fukui, S. 1992. The chemical form and acute toxicity of arsenic compounds in marine organisms. *Appl Organomet Chem.* 6: 155-160.
- Khokiattiwong, S. 2001. Arsenic compounds in tropical marine environments. *Ph.D. dissertation*, Institute of Biology, University of Southern Denmark, Denmark.

- Khoomrung, S. 2006. Analysis of total arsenic in soil and edible plant samples from Ronphibun sub-district, Nakorn Si Thammarat province by hydride generation atomic absorption spectrophotometry. *M.Sc. Thesis*, Faculty of Science, Prince of Songkla University, Thailand.
- Larsen E.H., Moseholm, L. and Nielsen M.M. 1992. Atmospheric deposition of trace elements around point sources and human health risk assessment: II. Uptake of arsenic and chromium by vegetables grown near a wood preservation factory. *Sci Total Environ*. 126: 263-275.
- Li, H. and Smart, R.B. 1996. Determination of sub-nanomolar concentration of arsenic(III) in natural waters by square wave cathodic stripping voltammetry. *Anal. Chim. Acta* 325: 25-32.
- Mcsheehy, S., Szpunar, J., Morabito, R. and Quevauiller, P. 2003. The speciation of arsenic in biological tissues and the certification of reference materials for quality control.
  Trends in Analytical Chemistry. 22(4): 191-209.
- Matschullat, J. 2000. Arsenic in the geosphere: a review. *Sci Total Environ*. 249: 297-312.
- Melamed, D. 2005. Monitoring arsenic in the environment: a review of science and technologies with the potential for field measurements. *Anal. Chim. Acta*. 532: 1-13.
- Merian, E. 1984. Introduction on environmental chemistry and global cycles of chromium, nickel, cobalt, beryllium, arsenic, cadmium and selenium and their derivatives.

  \*Toxicological and environmental chemistry\*, 8: 9-38.

- Molénat, N.A., Astruc, A., Holeman, M., Maury, G. And Pinel, R. 1999. Arsenic speciation by hydride generation quartz furnace atomic absorption spectrometry. Optimization of analytical parameters and application to environmental samples. *Analysis*. 27: 795-803.
- Na Chiengmai, N. 1991. Arsenic concentration in water, vegetables, fruits and hair of Amphoe Ron Phibun, Nakhon Si Thammarat province. *Songklanakarin. J. Sci. Technol.* 13(1): 59-67.
- Narcise, C.I.S., Coo, L.C. and Mundo. F.R. 2005. On-line preconcentration and speciation of arsenic by flow injection hydride generation atomic absorption spectrophotometry. *Talanta*. 68: 298-304.
- Ng, J.C. 2002. A review of arsenic toxicity. A report to the Department of Veteran Affairs,

  National Research Centre for Environmental Toxicology, The University of

  Queensland, Australia.
- Nha, T.T. 2004. Determination of arsenic species in contaminated soil leachates using hydride generation-GC coupled to ICPMS or quartz tube AAS. *Degree Project in Chemistry*. Department of Chemistry, Umea University, Sweden. pp 1-20.
- Nielsen, S. and Hansen, E.H. 1997. Determination of As(III) and As(V) by flow injection-hydride generation-atomic absorption spectrometry via on-line reduction of As(V) by KI. *Anal. Chim. Acta.* 343 : 5-17.
- Nriagu, J.O. 1994. Arsenic in the environment (Part I): Cycling and characterization. *John Wiley & Sons*. New York. pp. 1-82.
- Nriagu, J.O. and Azcue, J.M. 1990. Environmental sources of arsenic in food. *Adv. Environ. Sci. Technol.* 23: 103-127.

- Oshikawa, S., Geater, A., Chongsuvivatwong, V., Piampongsan, T., Chakraborti, D., Samanta, G., Mandel, B., Hotta, N., Kojo, Y. and Hironaka, H. 2001. Long-term changes in severity of arsenical skin lesions following intervention to reduce arsenic exposure. *Environ. Sci.* 5: 435-448.
- Piamphongsant, T. 1999. Chronic environmental arsenic poisoning. *Int. J. Dermatol.* 38: 401-410.
- Pongratz, R. 1998. Arsenic speciation in environmental samples of contaminated soil. *Sci Total Environ*. 224: 133-141.
- Profumo, A., Merli, D. and Pesavento, M. 2005. Votammetric determination of inorganic As(III) and total inorganic As in natural waters. *Anal. Chem. Acta*. 539:245-250.
- Rakwong, K. 1999. Risk behavior and sources of exposure to arsenic in school children at

  Tambon Ron Phibun Amphoe Ron Phibun, Changwat Nakhon Si Thammarat.

  M.Sc. Thesis, Environment Management, Prince of Songkla University,

  Thailand. (in Thai)
- Reimann, C. and Caritat, P. 1998. Chemical elements in the environment. Berlin: Springer. 398.
- Ruiz-Navarro, M.L., Navarro-Alarcón, M., Serrana, H.L.G., Pérez-Valero, V. and Lopez-Martinez, M.C. 1998. Urine arsenic concentrations in healthy adults as indicators of environmental contamination: Relation with some pathologies. *Sci Total Environ*. 216: 55-61.
- Saha, K.C. 1984. Melanokeratosis from Arsenic Contaminated Tubewell Water. *Indian J. Dermatol.* 29: 37-46.

- Samanta, G., Chowdhury, T.R., Mandal, B.K., Biswas, B.K., Chowdhury, U.K., Basu., G.K., Chanda, C.R., Lodh, D. and Chakraborti, D. 1999, Flow injection hydride generation atomic absorption spectrometry for determination of arsenic in water and biological samples from arsenic-affected districts of West Bengal, India, and Bangladesh. *Microchem. J.* 62: 174-191.
- Sancha, A.M. and Castro, M.L. 2001. Arsenic in Latin America: Occurrence, Exposure, Health Effects and Remediation. *Arsenic Exposure and Health Effects IV*. 87-96.
- Slejkovec, Z., Bajc, Z. and Doganoc, D.Z. 2004. Arsenic speciation patterns in freshwater fish. *Talanta*. 62: 931-936.
- Styblo, M., Hughes, M.F. and Thomas, D.J. 1996. Liberation and analysis of protein-bound arsenicals. *J Chromatogr B*. 677: 161-166.
- Suner, M.A., Devesa, V., Munoz, O., Velez, D. and Montoro, R. 2001. Application of column switching in high-performance liquid chromatography with on-line thermo-oxidation and detection by HG-AAS and HG-AFS for the analysis of organoarsenical species in seafood samples. *J. Anal. At. Spectrom.* 16: 390-397.
- Tseng, W.P., Chu, H.M., How, S.W., Fong, J.M., Lin, C.S. and Yeh, S. 1968. Prevalence of Skin Cancer in an Endemic Area of Chronic Arsenicism in Taiwan. *Journal of the National Cancer Institute*. 40: 453-463.
- US-EPA. 2001. Method 1632: Chemical speciation of arsenic in water and tissue by hydride generation quartz furnace atomic absorption spectrometry. U.S. Environmental Protection Agency, Office of Water, Engineering and Analysis Division (4303), Ariel Rios Building, Washington, D.C. pp 1-31.
- US-EPA. 2000. Federal Register. 65(121)/Thursday, June 22.

- Vallee, B.L., Unmer, D.D. and Wacker, W.E.C. 1960. Arsenic toxicology and biochemistry. *AMA Arch. Ind.Med*. 21: 56-75.
- Vassileva, E., Becker, A. and Broekaert, J.A.C. 2001. Determination of arsenic and selenium species in groundwater and soil extracts by ion chromatography coupled to inductively coupled plasma mass spectrometry. *Anal. Chim. Acta*. 441: 135-146.
- Villa-Lojo, M.C., Alonso-Rodríguez, E., López-Mahía, P., Muniategui-Lorenzo, S. and Prada-Rodríguez, D. 2002. Coupled high performance liquid chromatographymicrowave digestion-hydride generation-atomic absorption spectrometry for inorganic and organic arsenic speciation in fish tissue. *Talanta*. 57: 741-750.
- Visoottiviseth, P., Francesconi, K. and Sridokchan, W. 2002. The potential of Thai indigenous plant species for the phytoremediation of arsenic contaminated land. *Environmental Pollution*. 118: 453-461.
- Wang, L.F. and Huang, J.Z. 1994. Chronic Arsenism from Drinking Water in Some Areas of Xinjiang, China. In: Arsenic in the Environment, Part II: Human Health and Ecosystem Effects. Edited by J.O. Nriagu, *John Wiley & Sons, Inc*, 159-172.
- WHO. 1981. Arsenic. Environment Health Criteria, No.18. Geneva.
- WHO Regional Office for Europe. 2000. Air Quality Guidelines Second Edition: Arsenic. Copenhagen, Denmark. pp. 1-14.
- Woller, A., Mester, Z. and Fodor, P. 1995. Determination of arsenic species by high-performance liquid chromatography-ultrasonic nebulization-atomic fluorescence spectrometry.
   J. Anal. At. Spectrom. 10(9): 609-613.

- Wrobel, K., Wrobel, K., Parker, B., Kannamkumarath, S.S. and Caruso, J.A. 2002. Determination of As(III), As(V), monomethylarsonic acid, dimethylarsinic acid and arsenobetaine by HPLC-ICP-MS: analysis of reference materials, fish tissues and urine. *Talanta*. 58: 899-907.
- Zhang, W., Cai, Y., Tu, C. and Ma, L.Q. 2002. Arsenic speciation and distribution in an arsenic hyperacumulating plant. *Sci Total Environ*. 300: 167-177.
- Zhao, R., Zhao, M., Wang, H., Taneike, Y. and Zhang, X. 2006. Arsenic speciation in moso bamboo shoot-A terrestrial plant that contains organoarsenic species. *Sci Total Environ*. 371(1-3): 293-303.

http://elib.fda.moph.go.th/library/fulltext/public/2729/doo2.gif (20/12/05)

http://www.jesuitnola.org/upload/clark/labs/PerError.htm (11/1/06)

http://www.samunpri.com/modules.php?name=Herb&file=Herbs kitchen (11/1/06)

http://www.soils.wisc.edu (12/9/07)