

References

- (1) ศูนย์สารสนเทศ กรมวิชาการเกษตร. ข้อมูลนำเข้าวัตถุอันตรายทางการเกษตรปี 2541-2546. กรุงเทพฯ: กรมวิชาการเกษตร, 2541-2546.
- (2) Tu, M., Hurd, C., and Randall, M. J. Weed Control Methods Handbook. The Nature Conservancy, 2001.
- (3) Schuette, J. Environmental Fate of Glyphosate. Sacramento, CA, USA: Environmental Monitoring and Pest Management, 1998.
- (4) Monsanto Company. Backgrounder Glyphosate and Water Quality. Monsanto Imagine 2003.
- (5) Report of the Joint Meeting of the FAO Panel of Experts on Pesticide Residues in Food and the Environment and the WHO Core Assessment Group on Pesticide Residues, Lyons, France, 22 September - 1 October 1997. Food and Agriculture Organization of the United Nations, World Health Organization, Rome, Italy, 1998.
- (6) Constantine, D.S., and Constantina, N.K. Analytical methods to determine phosphonic and amino acid group-containing pesticides. Journal of Chromatography A 907 (2001): 1-19.
- (7) Krishna, N.R., Agnes, M.R., and Stephen, O.D. Aminomethylphosphonic acid, a metabolite of glyphosate, causes injury in glyphosate-treated, glyphosate-resistant soybean. Journal of Agricultural and Food Chemistry 52 (2004): 5139-5143.
- (8) Royer, A., Beguin, S., Tabet, J.C., Hulot, S., Reding, M.A., and Communal, P.Y. Determination of glyphosate and aminomethylphosphonic acid residues in water by gas chromatography with tandem mass spectrometry after exchange ion resin purification and derivatization. Application on vegetable matrices. Analytical Chemistry 72 (2000): 3826-3832.
- (9) Stephen, O.D., Agnes, M.R., Patrick, F.P., Krishna, N.R., and Reid, J.S. Isoflavone, glyphosate, and aminomethylphosphonic acid levels in seeds of glyphosate-treated, glyphosate-resistant soybean. Journal of Agricultural and Food Chemistry 51 (2003): 340-344.

- (10) Hiroyuki, K., Sunhi, R., Norihisa, S., and Masami, M. Simple and rapid determination of the herbicides glyphosate and glufosinate in river water, soil and carrot samples by gas chromatography with flame photometric detection. Journal of Chromatography A 726 (1996): 253-258.
- (11) Elisabet, B., and Lennart, T. New methods for determination of glyphosate and aminomethylphosphonic acid in water and soil. Journal of Chromatography A 886 (2000): 207-216.
- (12) Winfield, T.W., Bashe, W.J., and Baker, T.V. EPA method 547, Determination of glyphosate in drinking water by direct-aqueous-injection HPLC, post-column derivatization, and fluorescence detection. Cincinnati, OH: Office of Research and Development, US Environmental Protection Agency, 1990.
- (13) Determination of glyphosate by cation-exchange chromatography with postcolumn derivatization. Dionex Corporation, Sunnyvale, CA, USA: 1997.
- (14) Application Manual: Glyphosate. Pickering Laboratories, Inc., Mountain View, CA, USA: 2002.
- (15) Sancho, J.V., Hernandez, F., Lopez, F.J., Hogendoorn, E.A., Dijkman, E., and Zoonen, P. Rapid determination of glufosinate, glyphosate and aminomethylphosphonic acid in environmental water samples using precolumn fluorogenic labeling and coupled-column liquid chromatography. Journal of Chromatography A 737 (1996): 75-83.
- (16) Vreeken, R.J., Speksnijder, P., Bobeldijk-Pastorova, I., and Noij, Th.H.M. Selective analysis of the herbicides glyphosate and aminomethylphosphonic acid in water by on-line solid-electrospray ionization mass spectrometry. Journal of Chromatography A 794 (1998): 187-199.
- (17) Zavitsanos, P., and Meng, C.K. Analysis of glyphosate and aminomethylphosphonic acid by liquid chromatography/mass spectrometry. Agilent Technologies, Inc., Willington, DE, USA: 2001.
- (18) Nedelkosla, T.V., and Low, G.K-C. High-performance liquid chromatographic determination of glyphosate in water and plant material after pre-column derivatization with 9-fluorenylmethyl chloroformate. Analytica Chimica Acta 511 (2004): 145-153.
- (19) Rios, C., Salvado, V., and Hidalgo, M. Facilitated transport and preconcentration of the herbicide glyphosate and its metabolite AMPA through a solid

- supported liquid-membrane. Journal of Membrane Science 203 (2002): 201-203.
- (20) Corbera, M., Hidalgo, M., Salvado, V., and Wieczorek, P.P. Determination of glyphosate and aminomethylphosphonic acid in natural water using the capillary electrophoresis combined with enrichment step. Analytica Chimica Acta 540 (2005): 3-7.
- (21) Chang, S.Y., and Liao, C-H. Analysis of glyphosate, glufosinate and aminomethylphosphonic acid by capillary electrophoresis with indirect fluorescence detection. Journal of Chromatography A 959 (2002): 309-315.
- (22) Zhu, Y., Zhang, F., Tong, C., and Liu, W. Determination of glyphosate by ion chromatography. Journal of Chromatography A 850 (1999): 297-301.
- (23) Bauer, K-H., Knepper, T.P., Maes, A., Schatz, V., and Voihsel, M. Analysis of polar organic micropollutants in water with ion chromatography-electrospray mass spectrometry. Journal of Chromatography A 837 (1999): 117-128.
- (24) Mallat, E., and Barcelo, D. Analysis and degradation study of glyphosate and of aminomethylphosphonic acid in natural waters by means of polymeric and ion-exchange solid-phase extraction columns follow by ion chromatography—post-column derivatization with fluorescence detection. Journal of Chromatography A 823 (1998): 129-136.
- (25) Patsias, J., Papadopoulou, A., and Papadopoulou-Mourkidou, E. Automated trace level determination of glyphosate and aminomethylphosphonic acid in water by on-line anion-exchange solid-phase extraction followed by cation-exchange liquid chromatography and post-column derivatization. Journal of Chromatography A 932 (2001): 83-90.
- (26) Ibanez, M., Pozo, O.J., Sancho, J.V., Lopez, F.J., and Hernandez, F. Residue determination of glyphosate, glufosinate and aminomethylphosphonic acid in water and soil samples by liquid chromatography coupled to electrospray tandem mass spectrometry. Journal of Chromatography A 1081 (2005): 145-155.
- (27) Lee, E.A., Strahan, A.P., and Thurman, E.M. Methods of analysis by the U.S. geological survey organic geochemistry research group—determination of glyphosate, aminomethylphosphonic acid, and glufosinate in water using online solid-phase extraction and high-performance liquid

- chromatography/mass spectrometry. U.S. Geological Survey Information Services, Denver, CO, USA: 2002.
- (28) Dzygiel, P., and Wieczorek, P. Extraction of glyphosate by a supported liquid membrane technique. Journal of Chromatography A 889 (2000): 93-98.
- (29) Khrolenko, M.V., and Wieczorek, P.P. Determination of glyphosate and its metabolite aminomethylphosphonic acid in fruit juices using supported-liquid membrane preconcentration method with high-performance liquid chromatography and UV detection after derivatization with *p*-toluenesulphonyl chloride. Journal of Chromatography A 1093 (2005): 111-117.
- (30) Kou, D., Wang, X., and Mitra, S. Supported liquid membrane microextraction with high-performance liquid chromatography—UV detection for monitoring trace haloacetic acids in water. Journal of Chromatography A 1055 (2004): 63-69.
- (31) Richoll, S.M., Colon, I. Determination of triphenylphosphine oxide in active pharmaceutical ingredients by hollow-fiber liquid-phase microextraction followed by reversed-phase liquid chromatography. Journal of Chromatography A 1127 (2006): 147-153.
- (32) Yamini, Y., Reimann, C.T., Vatanara, A., Jönsson, J.A. Extraction and preconcentration of salbutamol and terbutaline from aqueous samples using hollow fiber supported liquid membrane containing anionic carrier. Journal of Chromatography A 1124 (2006): 57-67.
- (33) Garcia de Llasera, M.P., Gomez-Almeraz, L., Vera-Avila, L.E., and Pena-Alvarez, A. Matrix solid-phase dispersion extraction and determination by high- performance liquid chromatography with fluorescence detector of residues of glyphosate and aminomethylphosphonic acid in tomato fruit. Journal of Chromatography A 1093 (2005): 139-146.
- (34) Pawliszyn, J. Sampling and sample preparation for field and laboratory. Comprehensive analytical chemistry. Amsterdam, The Netherlands: Elsevier Science B.V. 2002.
- (35) Lindegard, B., Bjork, H., Jönsson, J.A., Mathiasson, L., and Ölsson, A-M. Automated column liquid chromatographic determination of a basic drug in blood plasma using the supported liquid membrane technique for sample pretreatment. Analytical Chemistry 66 (1994): 4490-4497.

- (36) Wang, X., Saridara, C., Mitra, S. Microfluidic supported liquid membrane extraction. Analytica Chimica Acta 543 (2005): 92-98.
- (37) Pedersen-Bjergaard, S., and Rasmussen, K.E. Liquid-liquid-liquid microextraction for sample preparation of biological fluids prior to capillary electrophoresis. Analytical Chemistry 71 (1999): 2650-2656.
- (38) Drapala, A., Dzygiel, P., Jönsson, J.A., and Wieczorek, P. Supported liquid membrane extraction of peptides. Acta Biochimica Polonica 48 (2001): 1113-1116.
- (39) Wieczorek, P., Jönsson, J.A., and Mathiasson, L. Concentration of amino acids using supported liquid membranes with di-2-ethylhexyl phosphoric acid as a carrier. Analytica Chimica Acta 346 (1997): 191-197.
- (40) Horwitz, W. Evaluation of analytical methods used for regulation of foods and drugs. Analytical Chemistry 54 (1982): 67A-76A.
- (41) Module 1: Scope of analytical chemistry. Professional chemical analysis project, Department of science, Ministry of Science and Technology, Thailand, April 2004.
- (42) Acceptable daily intakes, acute reference dosed, short-term and long-term dietary intakes, recommended maximum residue limits and supervised trials median residue values recorded by the 2005 meeting. Joint FAO/WHO meeting on pesticide residues, 5-6. 2005.

VITA

Miss Montra Piriayapittaya was born on June 5, 1982 in Bangkok, Thailand. She graduated with a Bachelor of Science degree in Industrial Chemistry from King Mongkut's Institute of Technology Ladkrabang in 2004. After which, she pursued a Master of Science degree in Analytical Chemistry at Chulalongkorn University. She completed the Master of Science Program in March 2007.