

CURRICULUM VITAE

Name Miss Karuna Jainontee

Date of birth February 13, 1981

Academic status

2004 B.S. (Chemistry), Chiang Mai University

2011 Ph.D. (Chemistry), Chiang Mai University

Scholarships

2004-2007 Full support from Development and Promotion of Science and Technology Talents (DPST)

Partial support from Post graduate Education and Research in Chemistry Program (PERCH)

2007-2009 Full support from Development and Promotion of Science and Technology Talents (DPST)

Partial support from the Commission on High Education (CHE)

Practical experiences

Teaching Assistant, Department of Chemistry, Faculty of Science, Chiang Mai university, 2005-2010.

- General Chemistry Laboratory I course
- General Chemistry Laboratory II course
- Analytical Chemistry Laboratory course

Presentation

International Conferences

1. “Spectrophotometric analysis of component colors in colorant with the aids of principal component regression and partial least squares”, **Karuna Jainontee**, Vannajan Sanghiran Lee, Sukon Prasitwattanaseree, Jeerayut Chaijaruwanich, Jaron Jakmune and Kate Grudpan, International Conference on Flow Injection Analysis 2007, Berlin, Germany, 3-7 September 2007.

2. “Application of Chemometrics to Analytical Results for Biomarker Assay: Chondroitin Sulphate Proteoglycans”, **Karuna Jainontee**, Vannajan Sanghiran Lee, Sukon Prasitwattanaseree, Jaron Jakmune, Suporn Kradtap Hartwell, Supada Khonyoung, and Kate Grudpan, International Symposium on Flow Based Analysis VII (ISFBA-2007), Chiang Mai, Thailand, 16-18 December 2007.

3. “Clustering analysis applying to signals obtained from flow injection analysis of blood osmotic fragility test for thalassemia screening”, **Karuna Jainontee**, Vannajan Sanghiran Lee, Sukon Prasitattanaseree, Jaron Jakmune, Supada Khonyoung, Suporn Kradtap Hartwell and Kate Grudpan, 14th Asian Chemical Congress 2011, Bangkok, Thailand, 5-8 September 2011.

National Conferences

1. “PCA for grouping: identification of components in a dye mixture”, **Karuna Jainontee**, Jaron Jakmune, and Kate Grudpan, the 5th Annual symposium on TRF Senior Reseach Scholar, Chiang Mai, Thailand, 12 August 2006.

2. “Using Principal Component Regression in the Determination of Component Colors in Colorant Mixtures”, **Karuna Jainontee**, Vannajan Sanghiran Lee, Jaron

Jakmune and Kate Grudpan, PERCH-CIC Congress V, Pattaya, Thailand, 6-9 May 2007.

3. “Application of Principal Component Regression and Partial Least Squares in Spectrophotometric Analysis of Color Components in Mixtures”, **Karuna Jainontee**, Vannajan Sanghiran Lee, Sukon Prasitwattanaseree, Jeerayut Chaijaruwanich, Jaroon Jakmune and Kate Grudpan, the 6th Annual symposium on TRF Senior Research Scholar and Research Group on Innovation on Analytical Instrumentation CHE, Chiang Mai, Thailand, 16 August 2007.

4. “Partial Least Square 2, Alternative way for determination of colorants mixtures”, **Karuna Jainontee**, Vannajan Sanghiran Lee, Sukon Prasitattanaseree,

Jeerayut Chaijaruwanich, Jaroon Jakmune and Kate Grudpan, symposium for Younger generation researchers, Chiang Mai, Thailand, 8 August 2008.

5. “Determination of Colorants Mixture Solution by Spectrometry Combined with Partial Least Square 2 Method”, **Karuna Jainontee**, Vannajan Sanghiran Lee, Sukon Prasitattanaseree, Jeerayut Chaijaruwanich, Jaroon Jakmune and Kate Grudpan, The 34th Congress on Science and Technology of Thailand, Bangkok, Thailand, 29-30 October 2008.

6. “Assay of food colorants by chemometric approach”, **Karuna Jainontee**, Vannajan Sanghiran Lee, Sukon Prasitattanaseree, Jeerayut Chaijaruwanich, Jaroon Jakmune and Kate Grudpan, วันวิชาการมหาวิทยาลัยเชียงใหม่ ครั้งที่ 4 “วิจัย: นวัตกรรมเพื่อชีวิต”, Chiang Mai, Thailand, 19-20 December 2008.

THE RELEVANCE OF THE RESEARCH WORK TO THAILAND

Chemical analyses may encounter tedious operation, especially for a sample with complicate matrices. Chemometric techniques may reduce such the tedious work as well as reducing the consumption of chemicals needed for such the analyses. Mathematics and statistic treatment will be very useful for the evaluation of analytical data. In this work chemometrics were applied to three problems. The first one for the differentiation of the protein contents (WF6) for the ones with cervix cancer or ovarian cancer from normal persons. The second one involves thalassemia screening in diagnosis. The third one involved simultaneous assay of each component in a ternary mixture of food colorants without using chemical separation. The chemometric treatment can reduce cost of analysis as well as chemical waste.