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APPENDICES

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

APPENDIX A

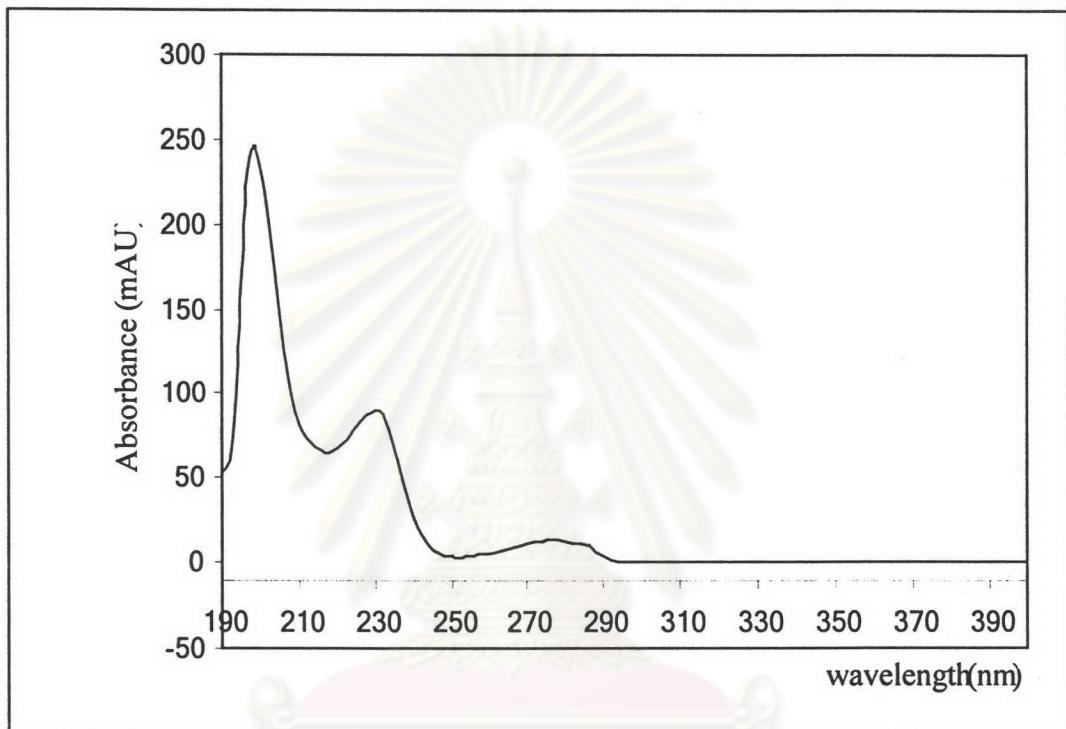


Figure A-1. UV spectrum of BFDGE \cdot 2H₂O. BADGE, BFDGE and their derivatives have similar UV spectra.

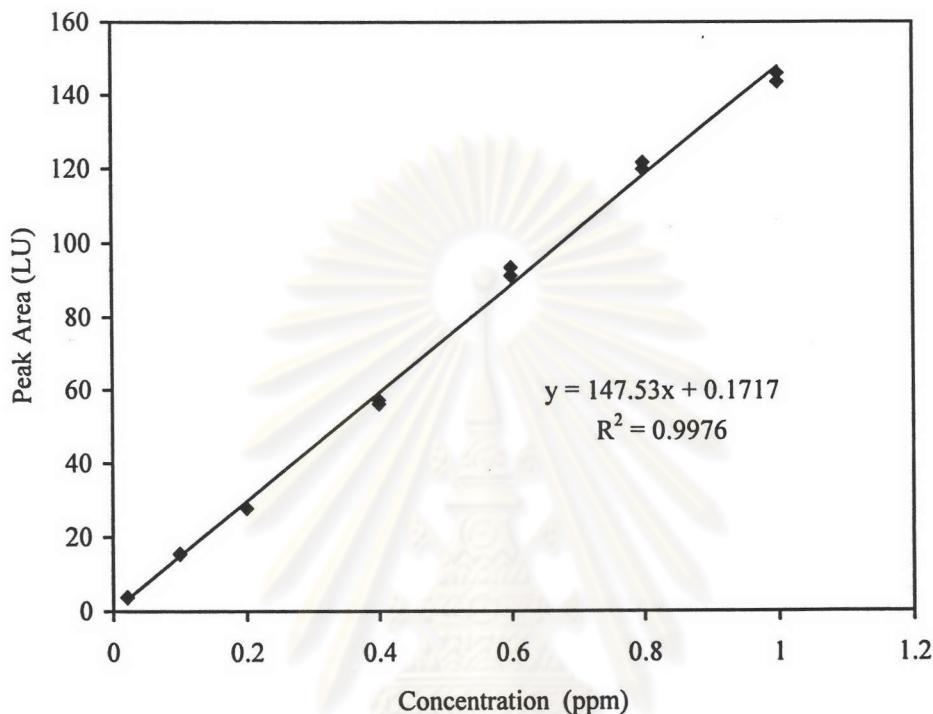
APPENDIX B

Figure B-1. Calibration curve of BFDGE.2H₂O by HPLC condition listed in Table 4.3.

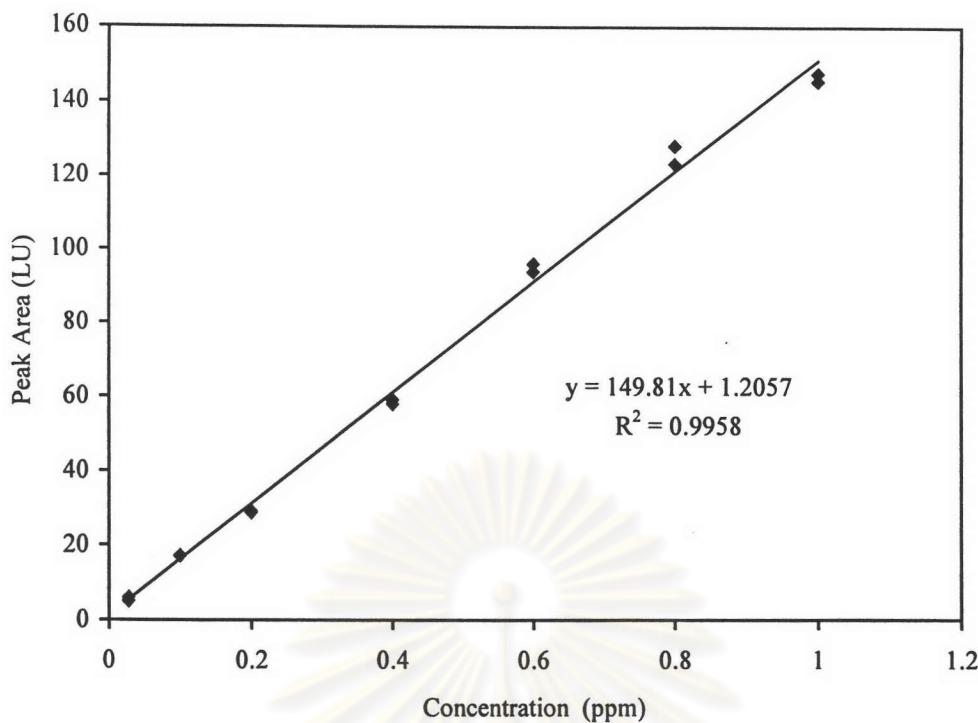


Figure B-2. Calibration curve of BADGE.2H₂O by HPLC condition listed in Table 4.3.

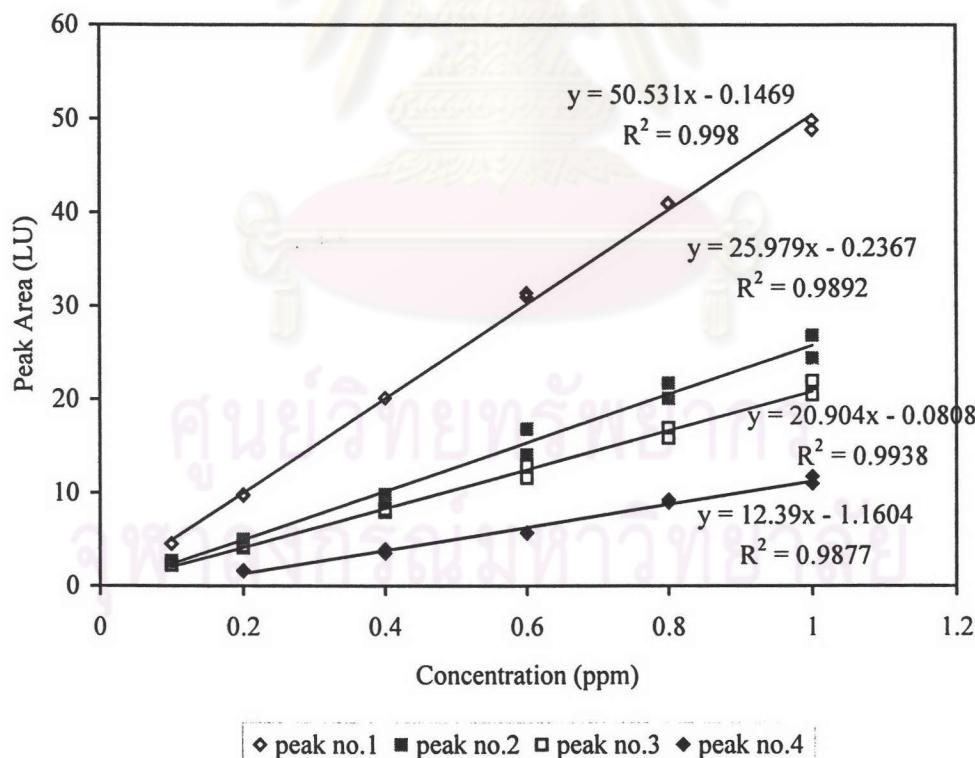


Figure B-3. Calibration curves of BFDGE.H₂O by HPLC condition listed in Table 4.3.

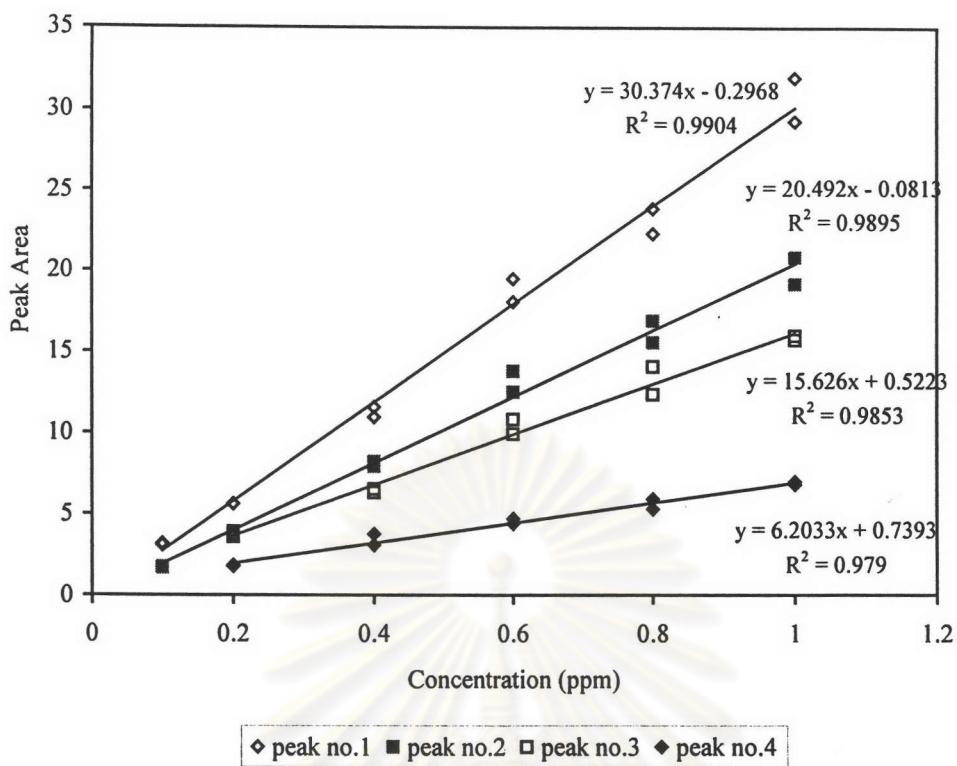


Figure B-4. Calibration curves of BFDGE.HCl.H₂O by HPLC condition listed in Table 4.3.

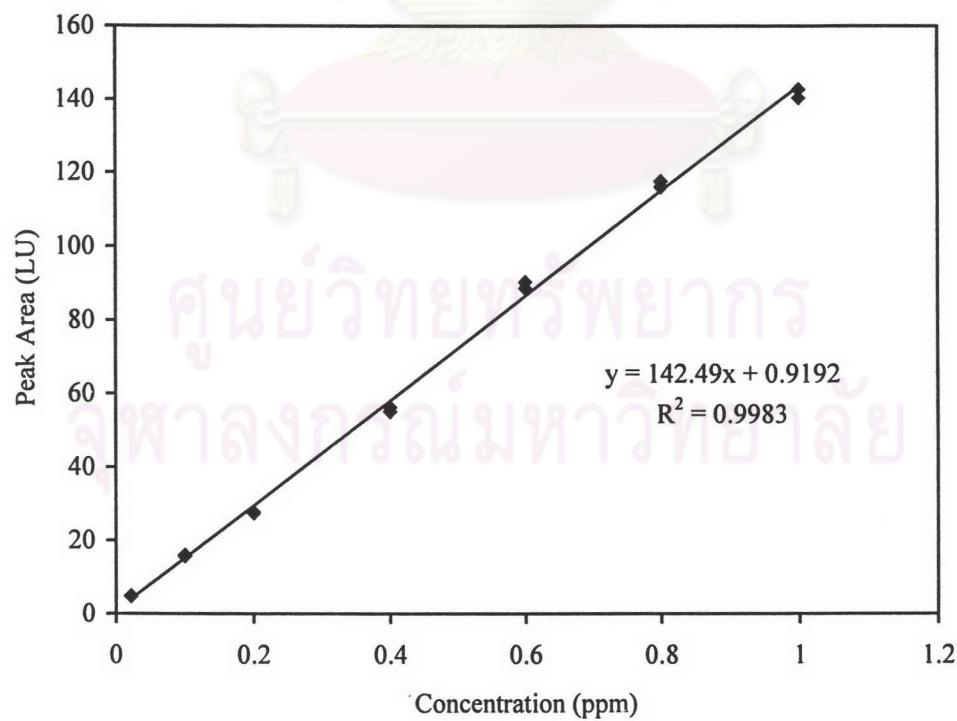


Figure B-5. Calibration curve of BADGE.H₂O by HPLC condition listed in Table 4.3.

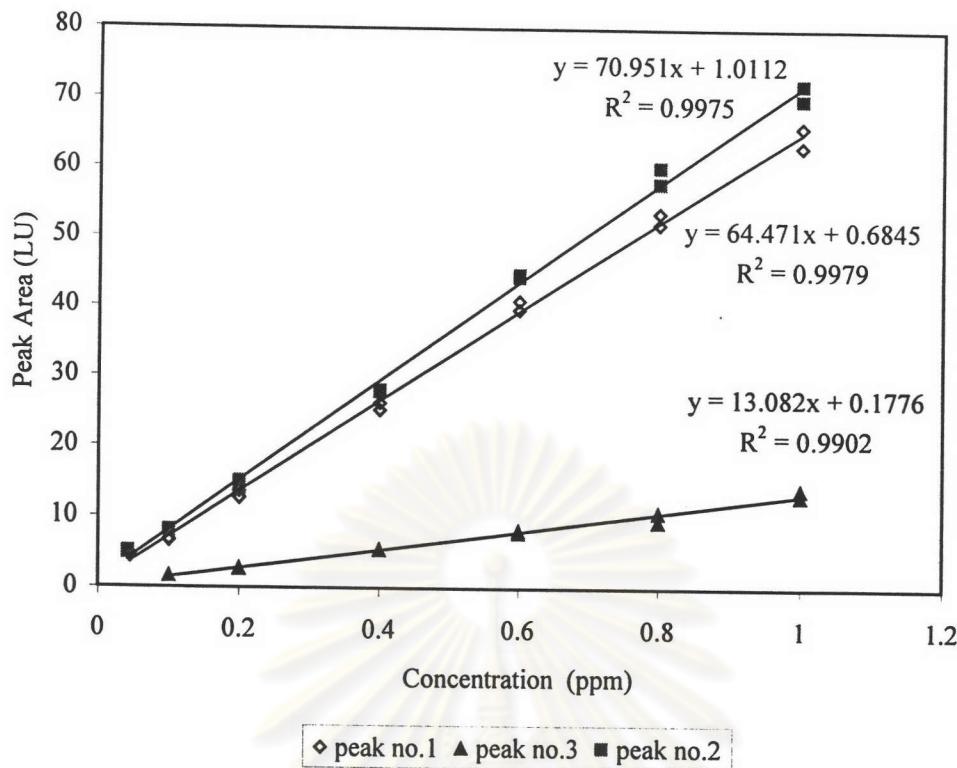


Figure B-6. Calibration curves of BFDGE by HPLC condition listed in Table 4.3.

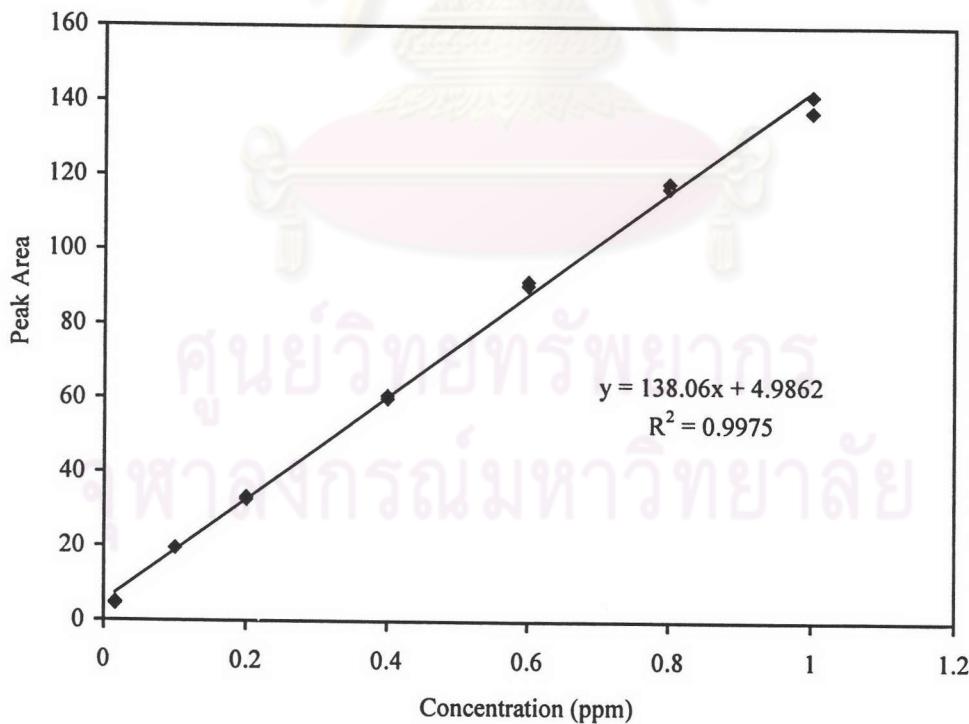


Figure B-7. Calibration curve of BADGE.HCl.H₂O by HPLC condition listed in Table 4.3.

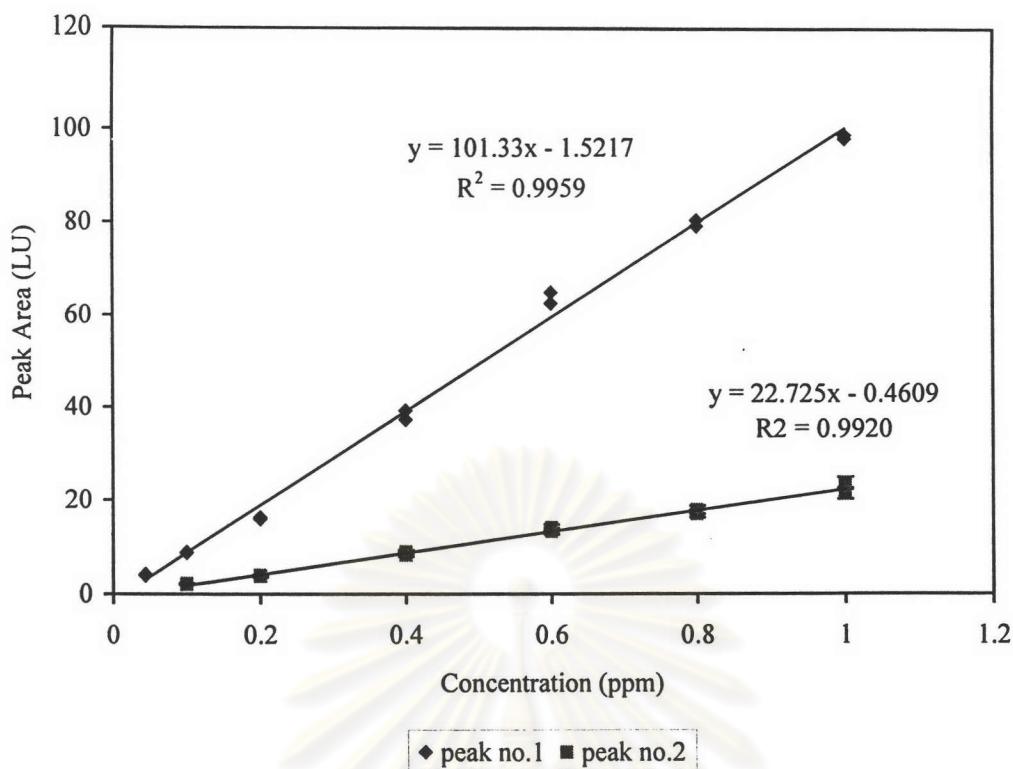


Figure B-8. Calibration curves of BFDGE.HCl by HPLC condition listed in Table 4.3.

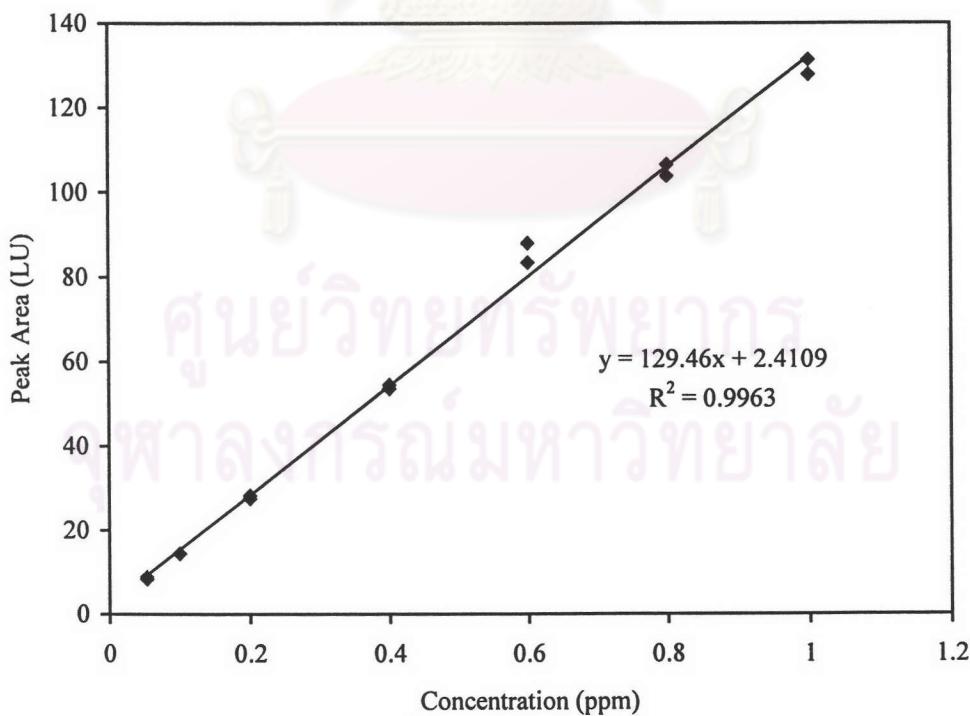


Figure B-9. Calibration curve of BFDGE.2HCl by HPLC condition listed in Table 4.3.

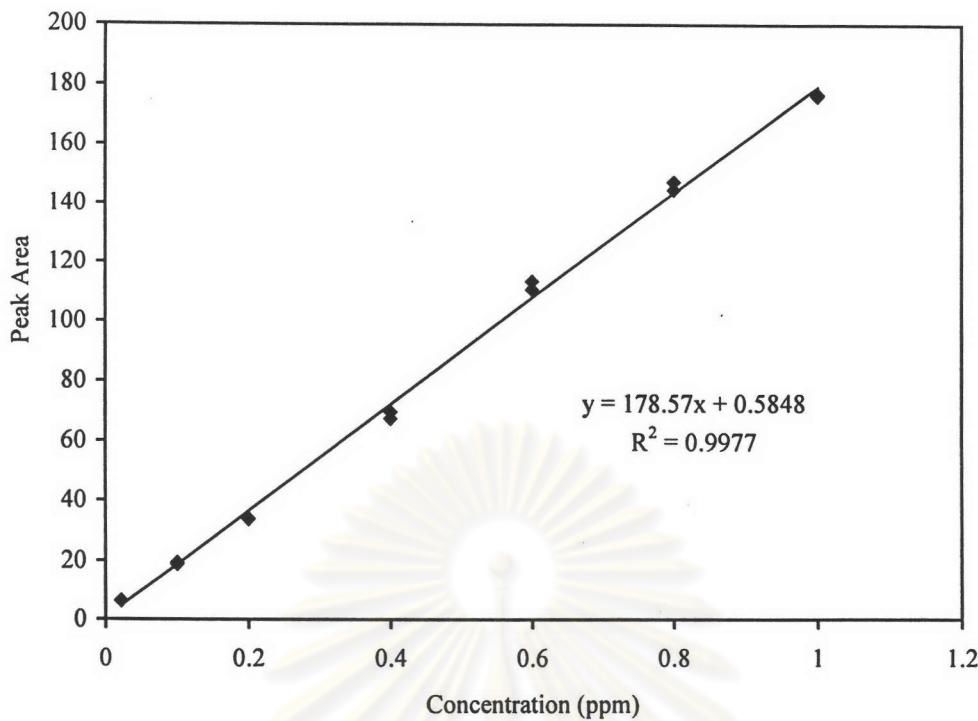


Figure B-10. Calibration curve of BADGE by HPLC condition listed in Table 4.3.

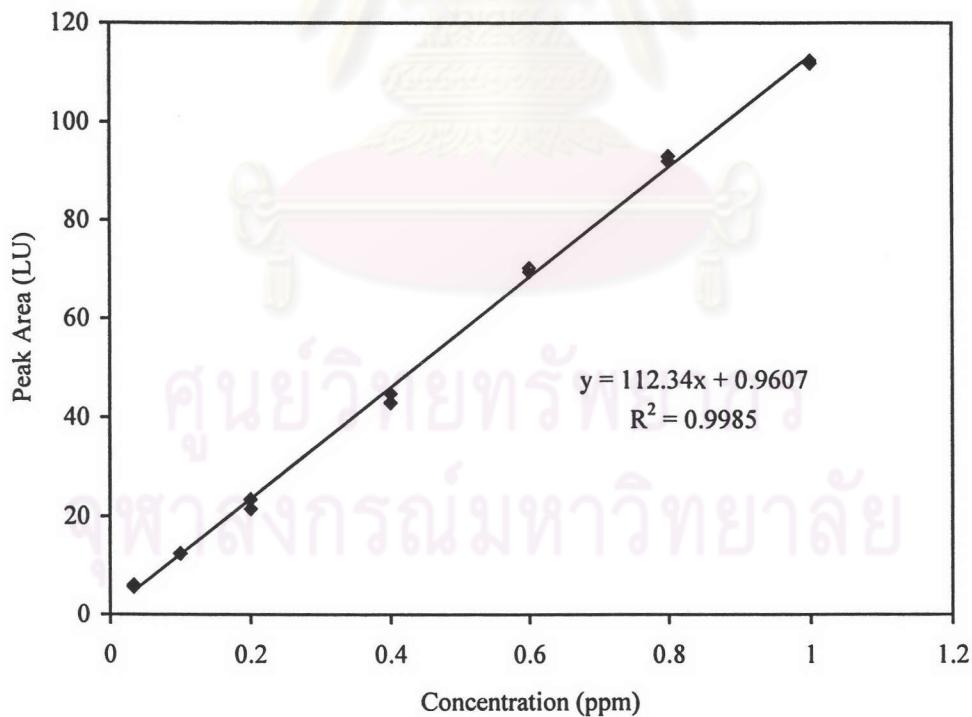


Figure B-11. Calibration curve of BADGE.HCl by HPLC condition listed in Table 4.3.

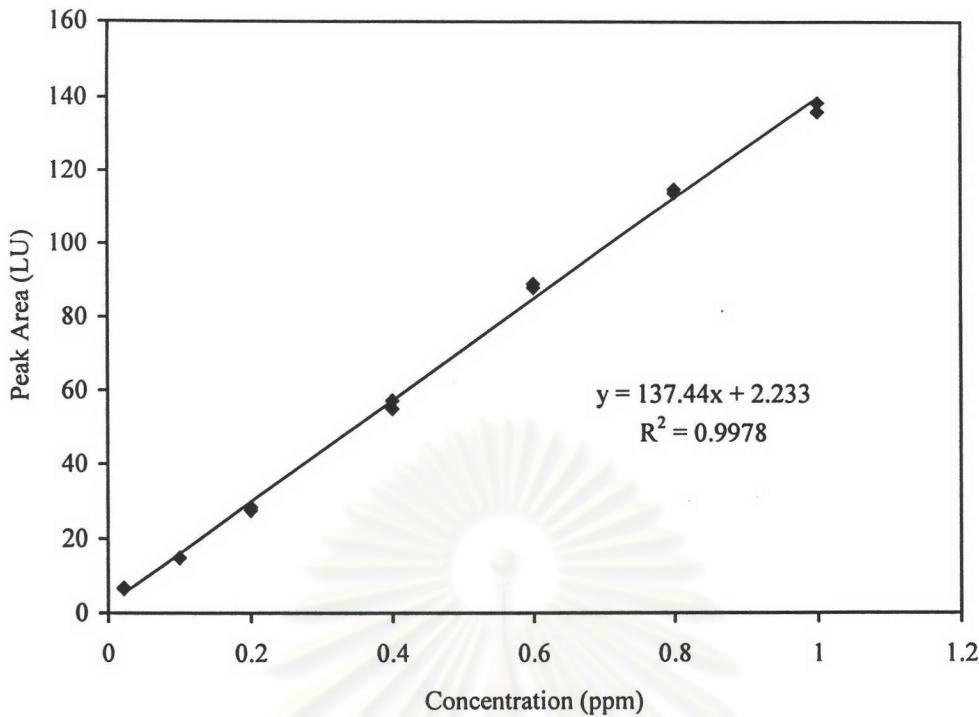


Figure B-12. Calibration curve of BADGE.2HCl by HPLC condition listed in Table 4.3.

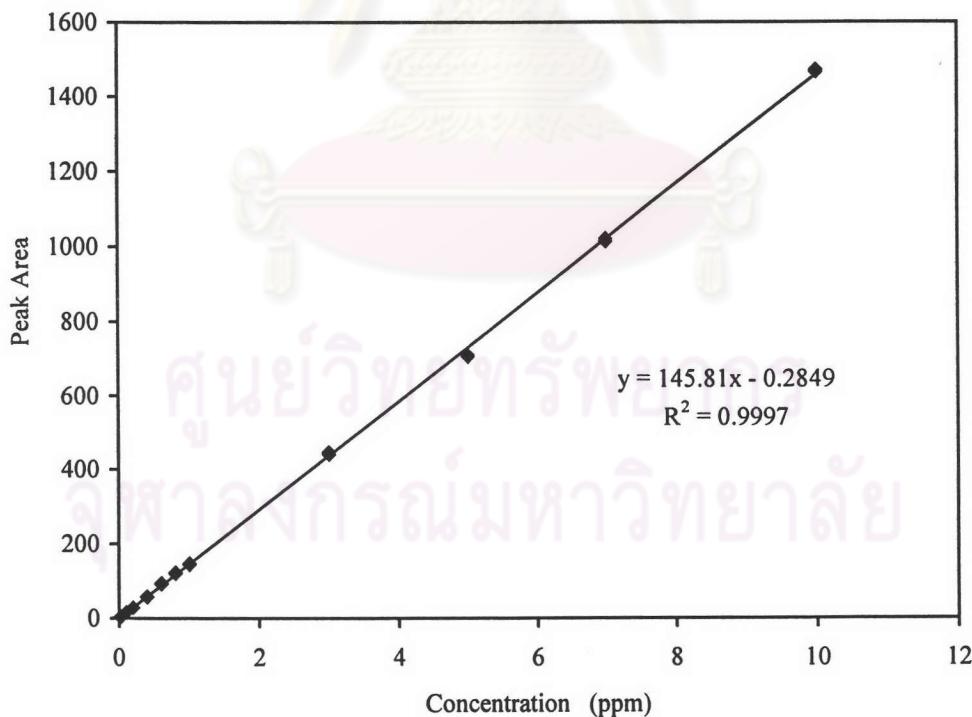


Figure B-13. The relationship between concentration of BFDGE.2H₂O and peak area by HPLC condition listed in Table 4.3.

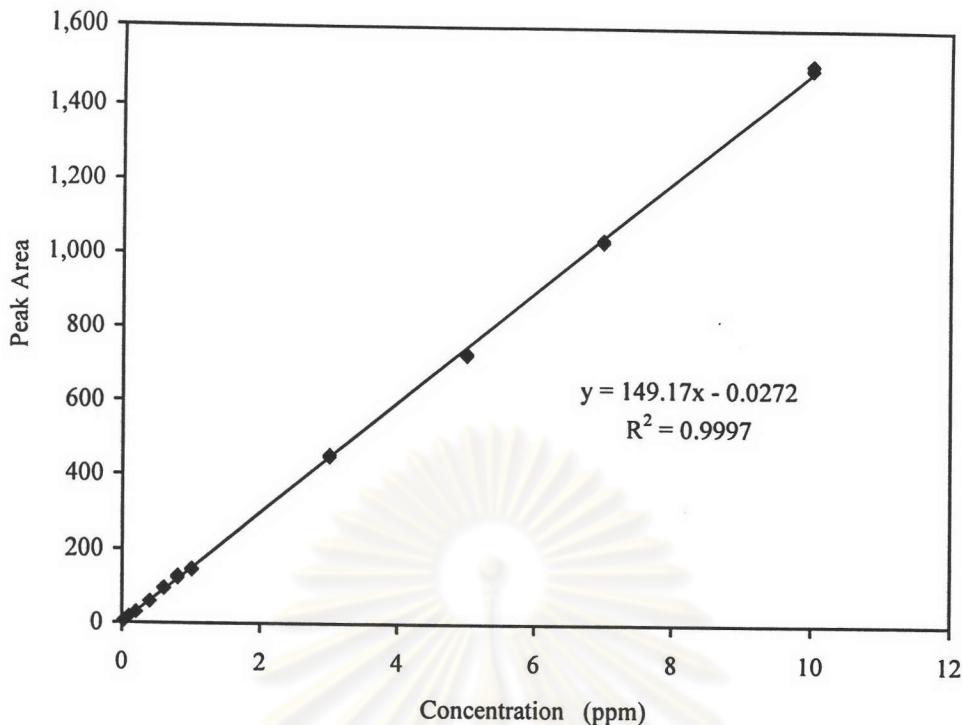


Figure B-14. The relationship between concentration of BADGE.2H₂O and peak area by HPLC condition listed in Table 4.3.

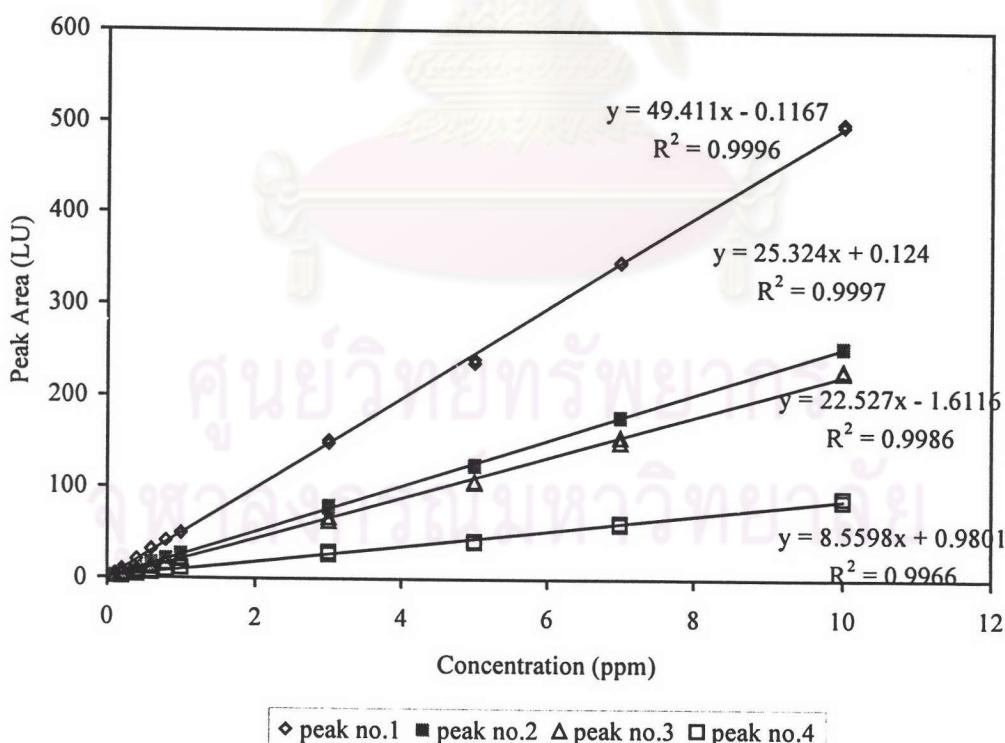


Figure B-15. The relationships between concentration of BFDGE.H₂O and peak area by HPLC condition listed in Table 4.3.

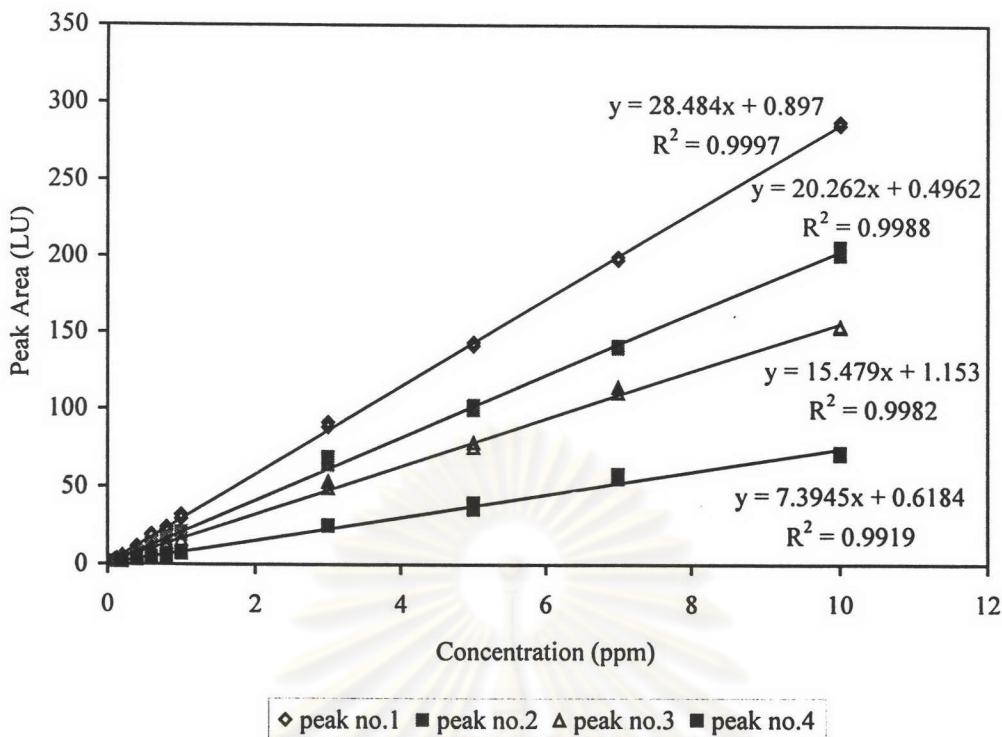


Figure B-16. The relationships between concentration of BFDGE.HCl.H₂O and peak area by HPLC condition listed in Table 4.3.

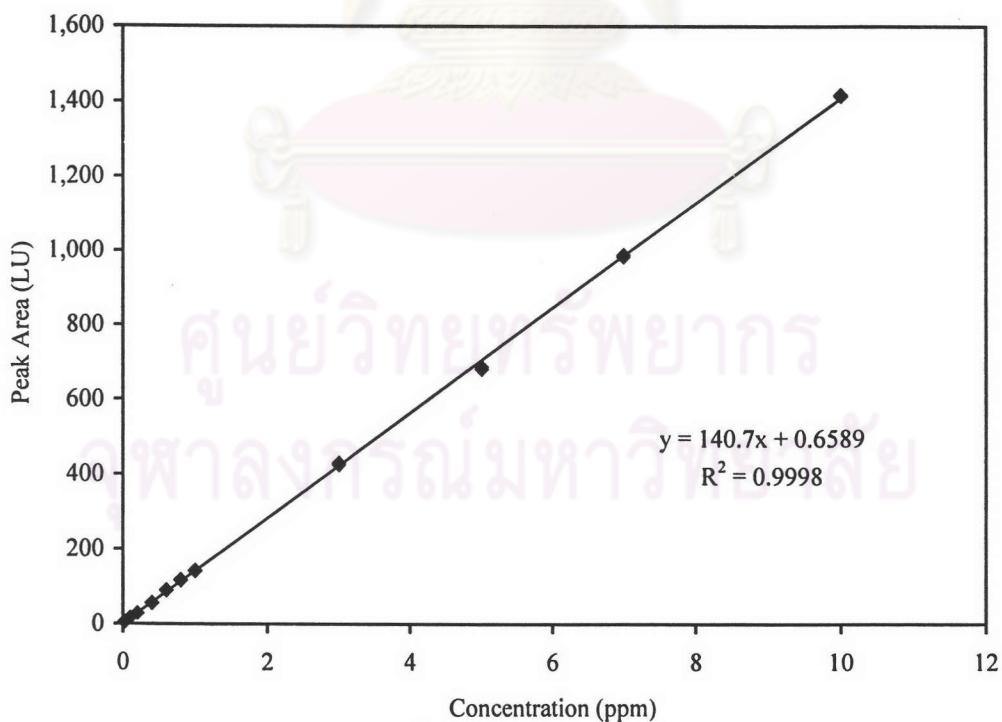


Figure B-17. The relationship between concentration of BADGE.H₂O and peak area by HPLC condition listed in Table 4.3.

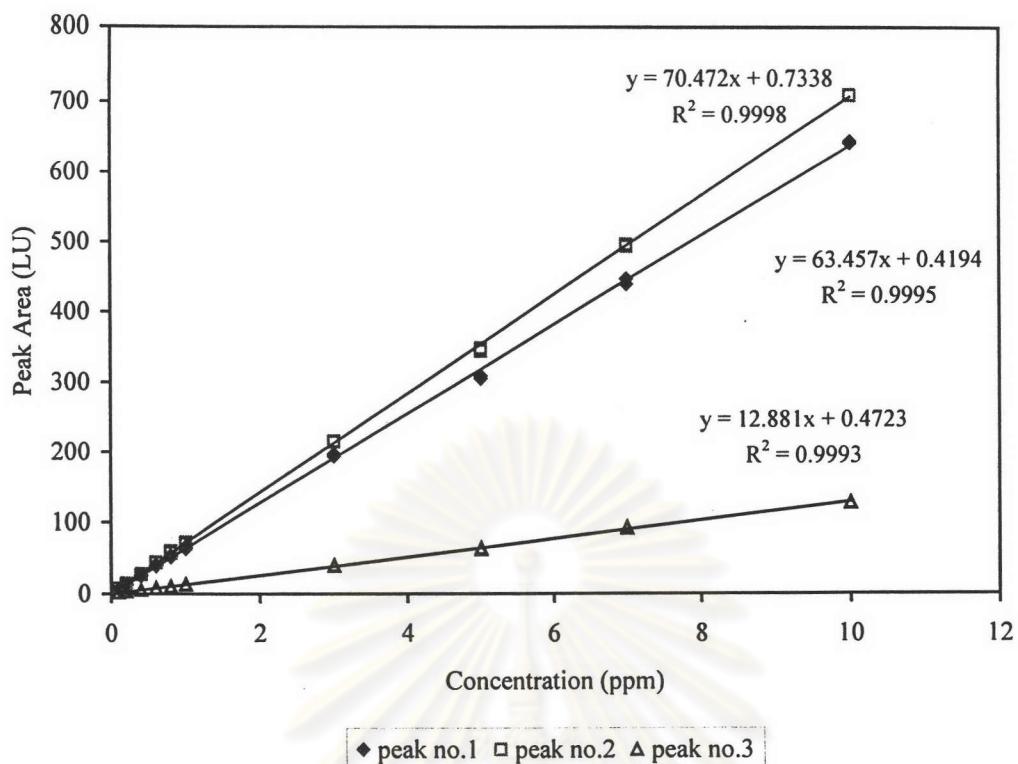


Figure B-18. The relationship between concentration of BFDGE and peak area by HPLC condition listed in Table 4.3.

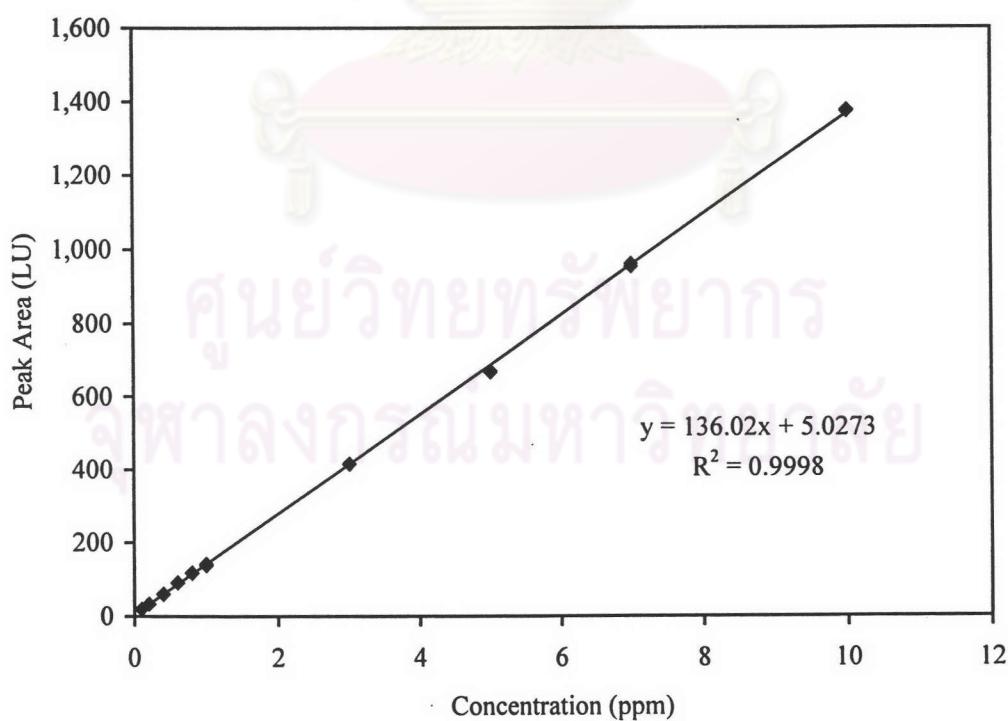


Figure B-19. The relationship between concentration of BADGE.HCl.H₂O and peak area by HPLC condition listed in Table 4.3.

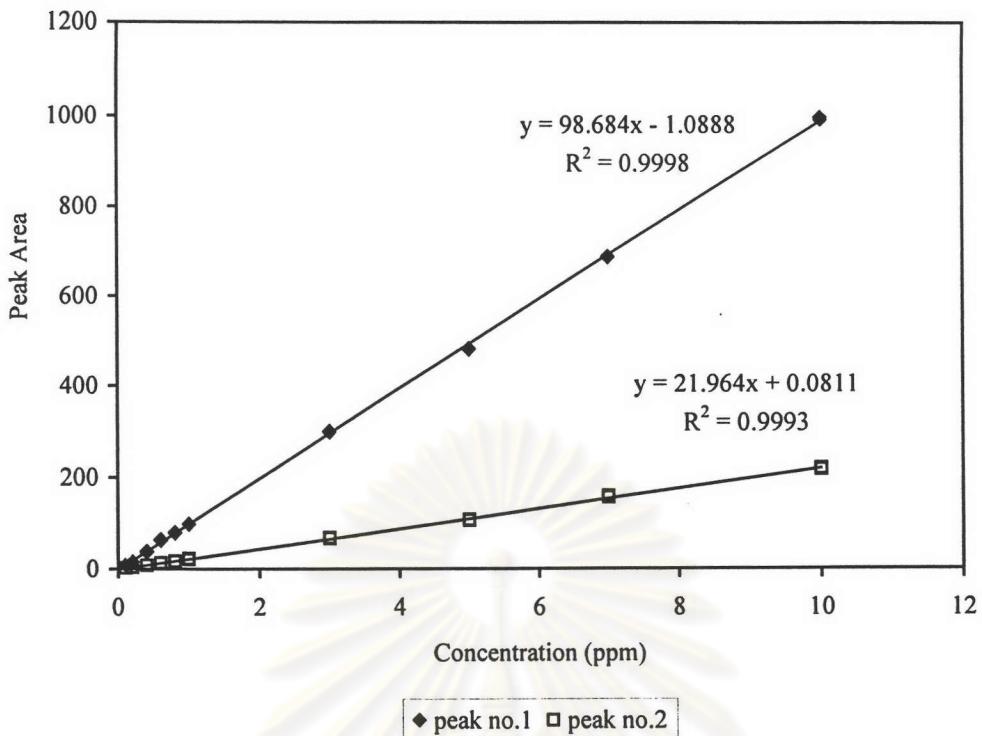


Figure B-20. The relationship between concentration of BFDGE.HCl and peak area by HPLC condition listed in Table 4.3.

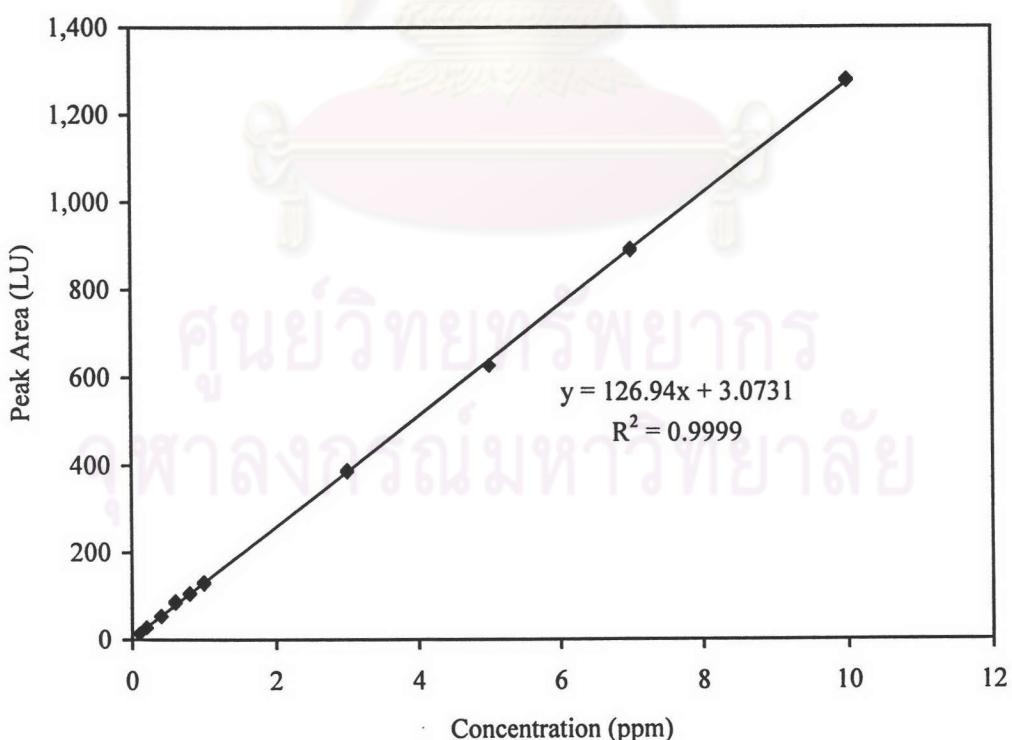


Figure B-21. The relationship between concentration of BFDGE.2HCl and peak area by HPLC condition listed in Table 4.3.

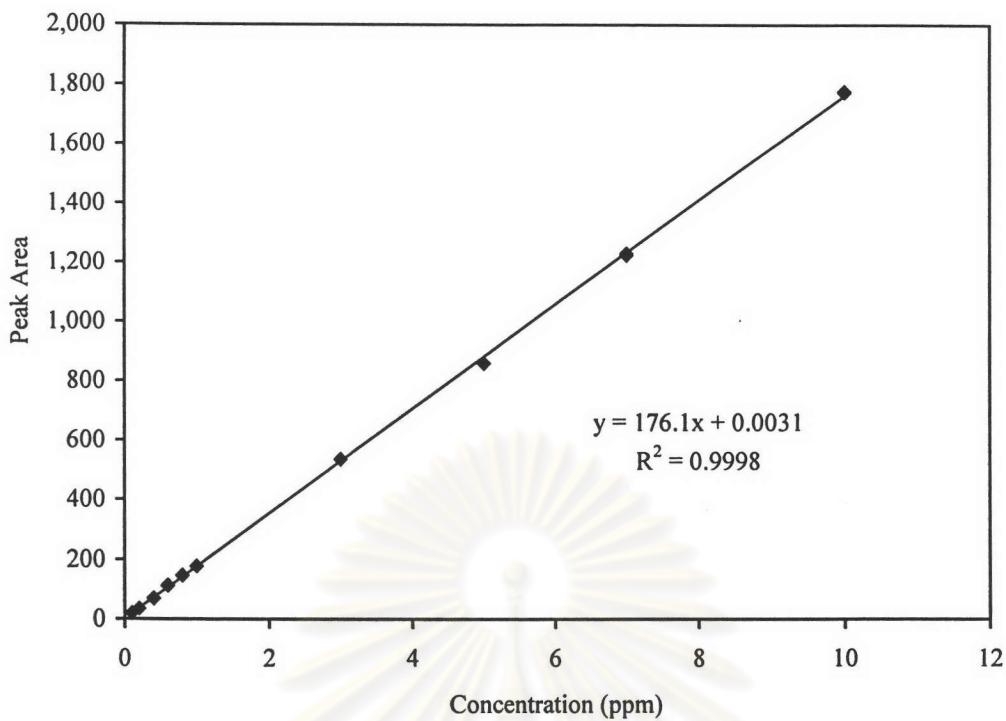


Figure B-22. The relationship between concentration of BADGE and peak area by HPLC condition listed in Table 4.3.

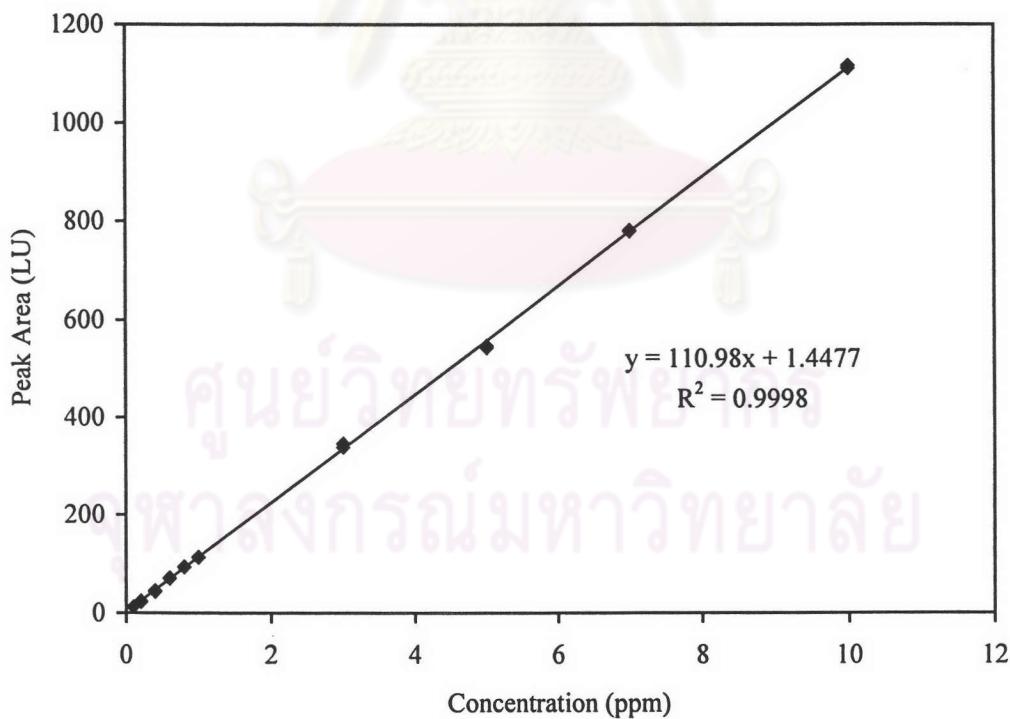


Figure B-23. The relationship between concentration of BADGE.HCl and peak area by HPLC condition listed in Table 4.3.

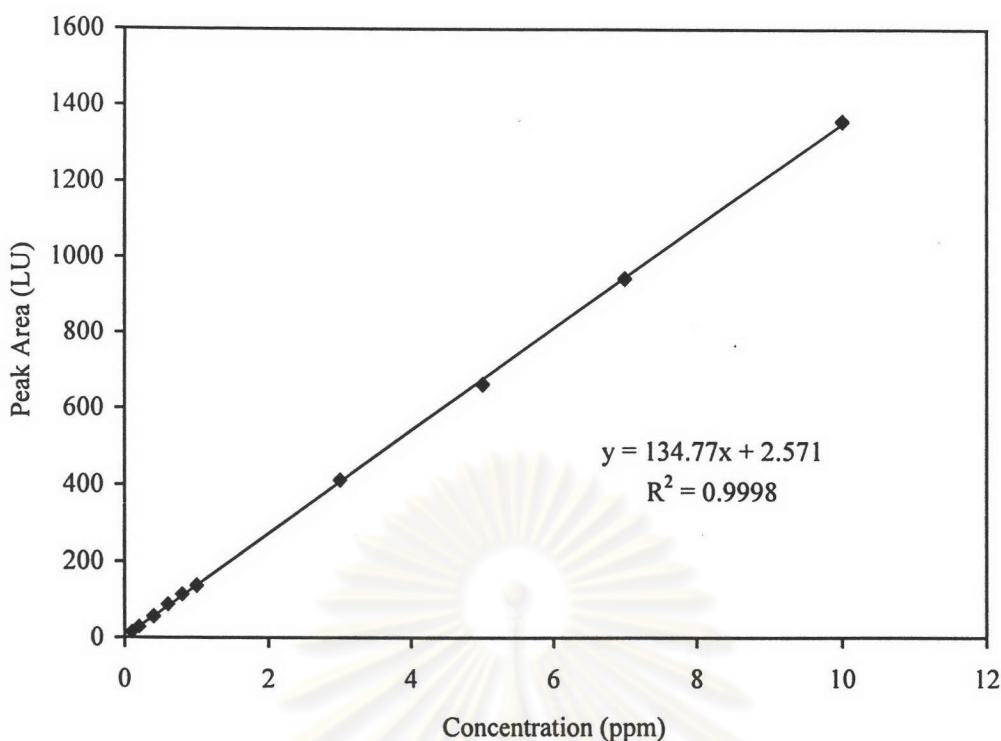


Figure B-24. The relationship between concentration of BADGE.2HCl and peak area by HPLC condition listed in Table 4.3.

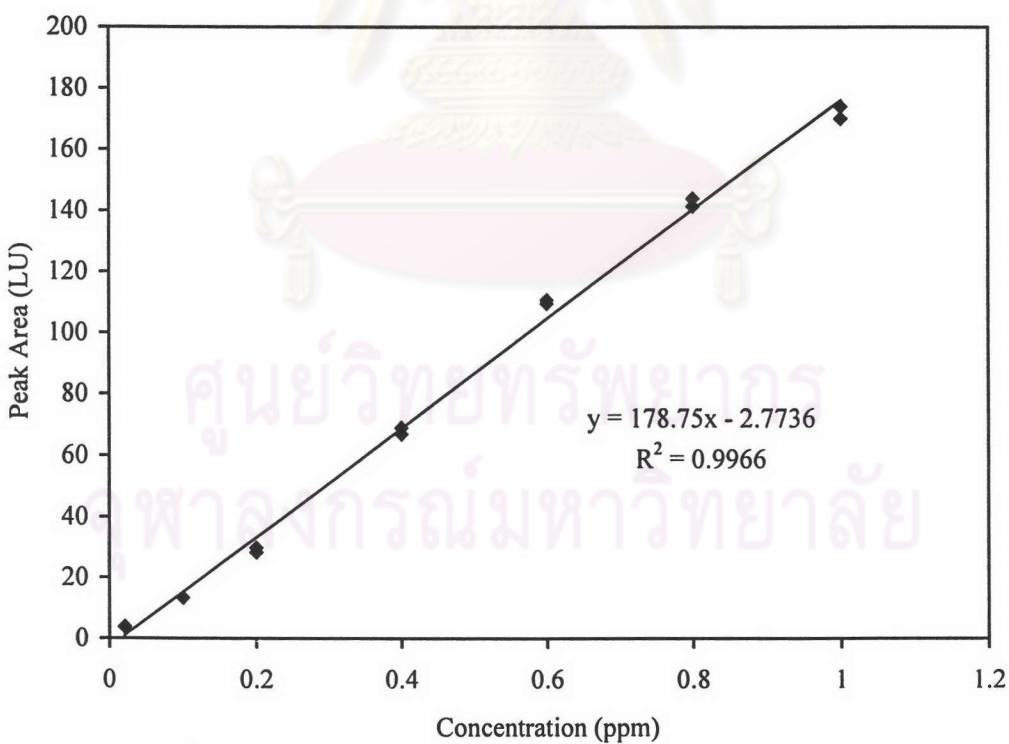


Figure B-25. Matrix calibration curve of BFDGE.2H₂O by HPLC condition listed in Table 4.3.

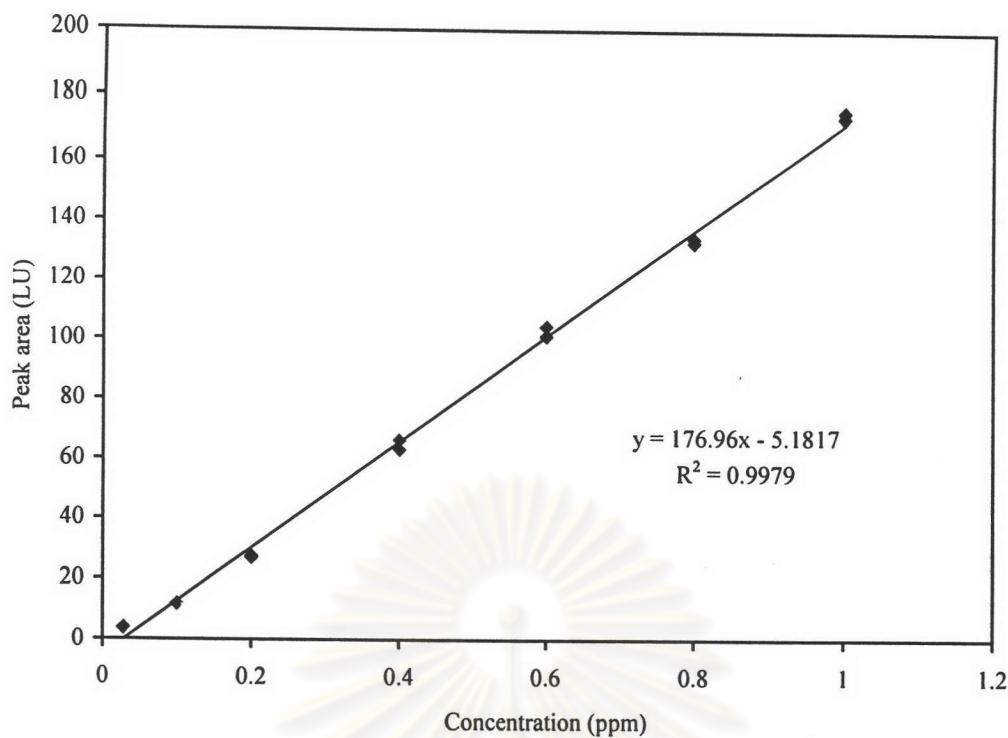


Figure B-26. Matrix calibration curve of BADGE.2H₂O by HPLC condition listed in Table 4.3.

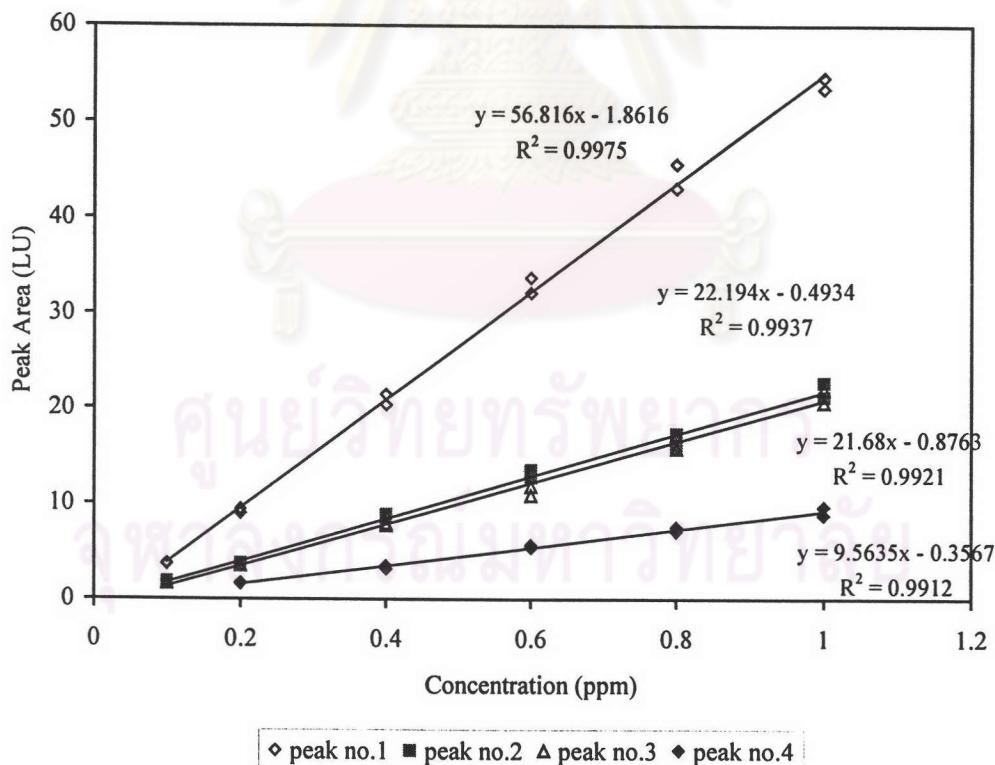


Figure B-27. Matrix calibration curves of BFDGE.H₂O by HPLC condition listed in Table 4.3.

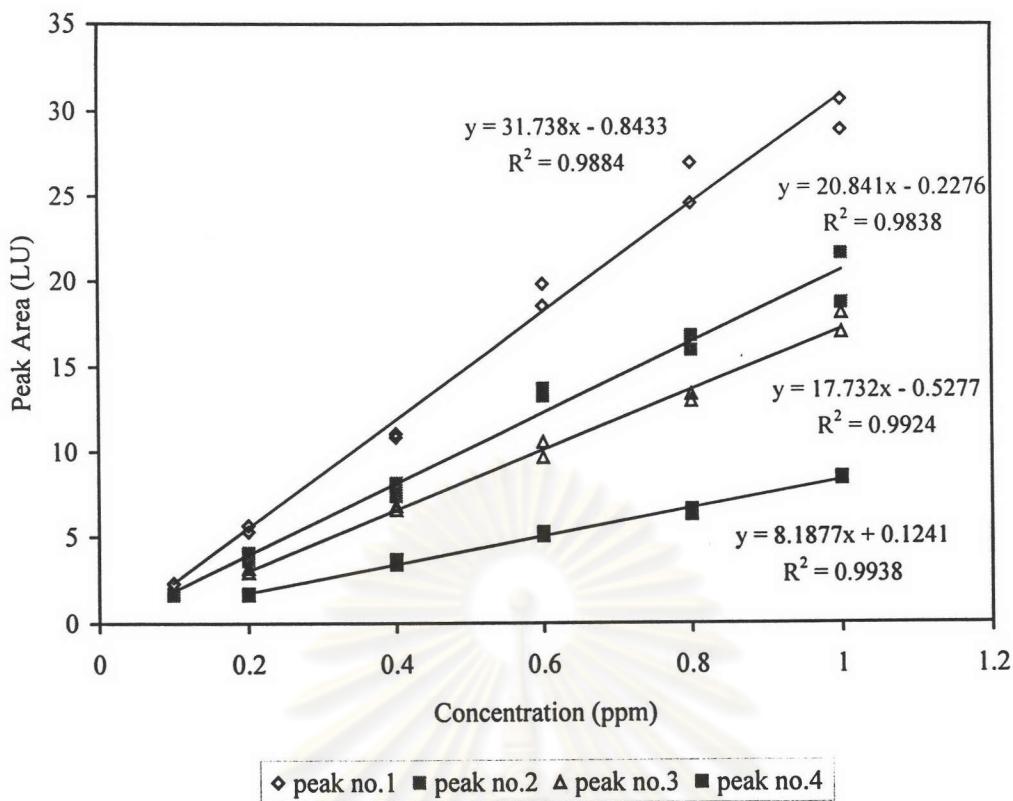


Figure B-28. Matrix calibration curves of BFDGE.HCl.H₂O by HPLC condition listed in Table 4.3.

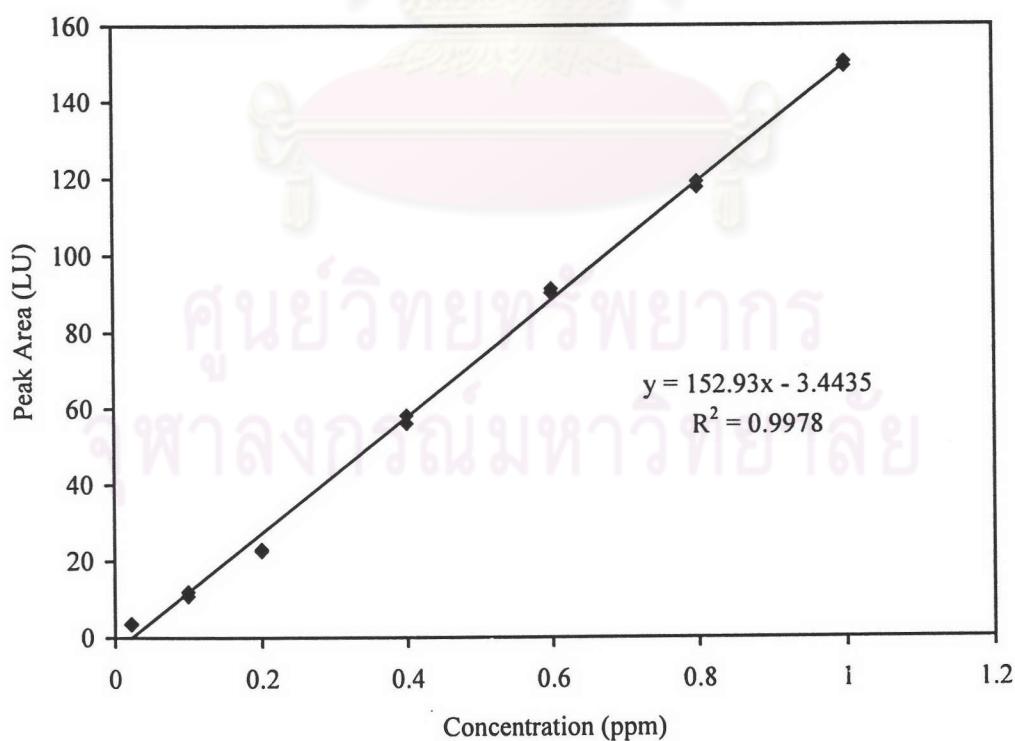


Figure B-29. Matrix calibration curve of BADGE.H₂O by HPLC condition listed in Table 4.3.

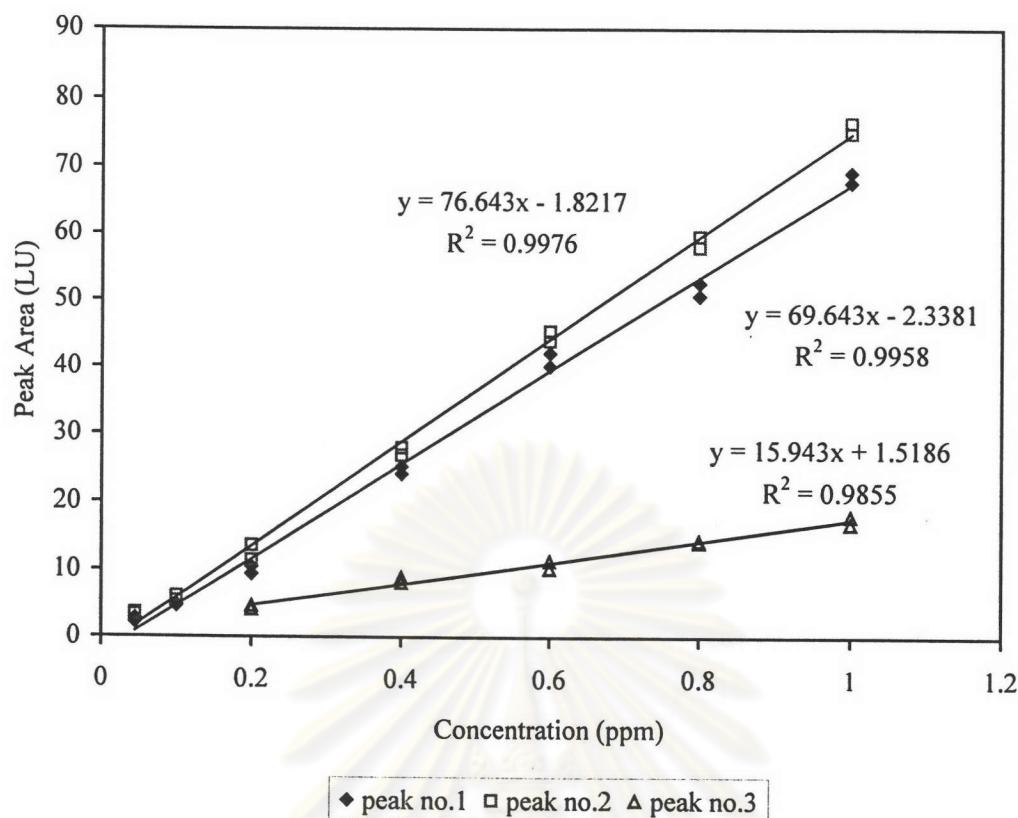


Figure B-30. Matrix calibration curves of BFDGE by HPLC condition listed in Table 4.3.

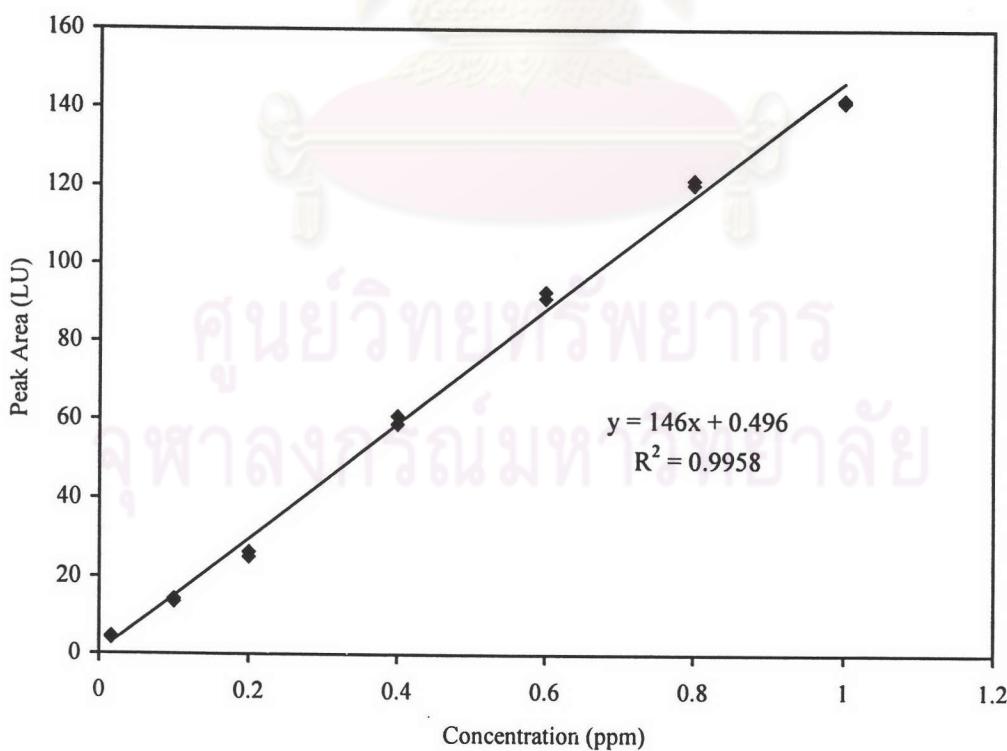


Figure B-31. Matrix calibration curve of BADGE.HCl.H₂O by HPLC condition listed in Table 4.3.

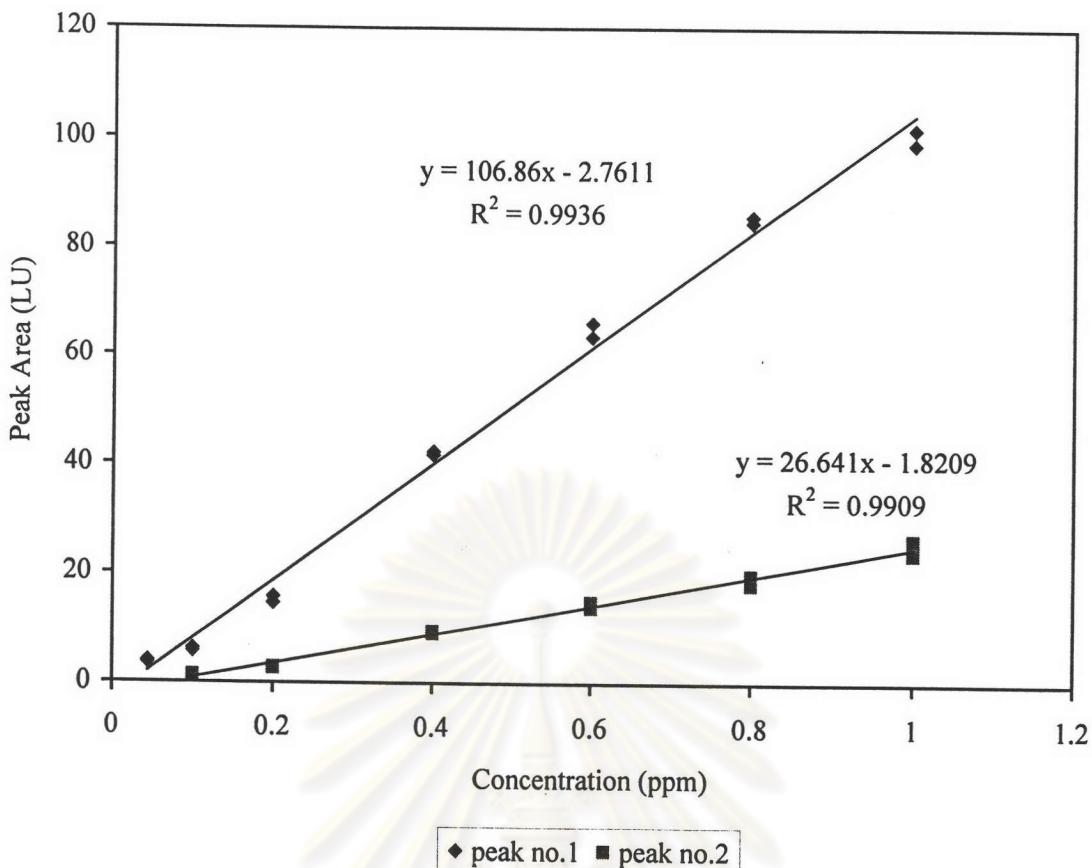


Figure B-32. Matrix calibration curves of BFDGE.HCl by HPLC condition listed in Table 4.3.

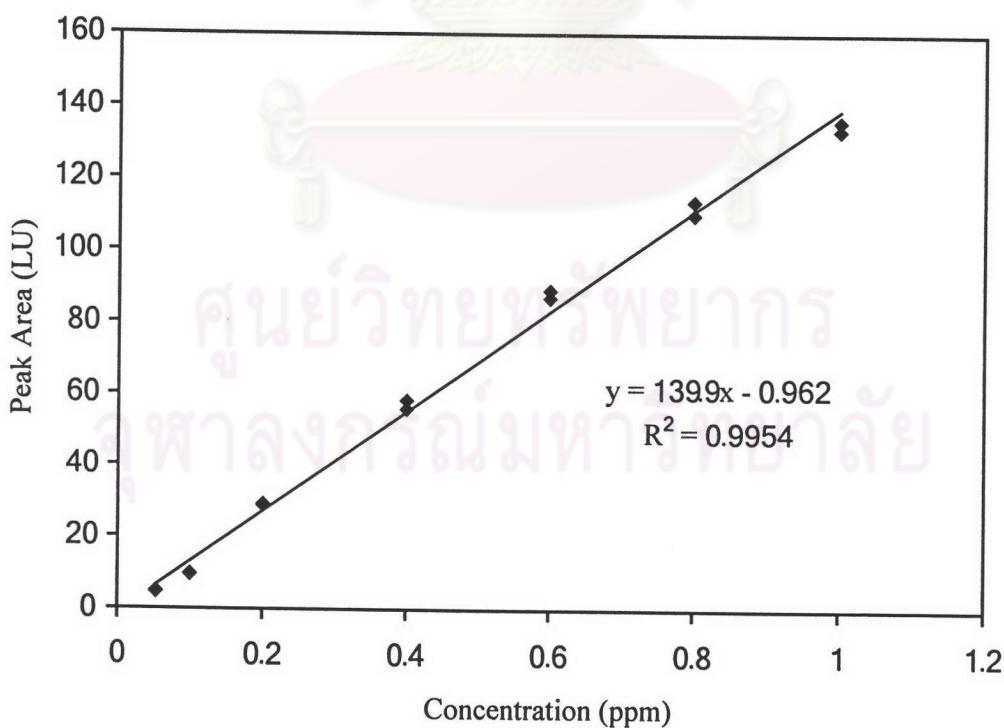


Figure B-33. Matrix calibration curve of BFDGE.2HCl by HPLC condition listed in Table 4.3.

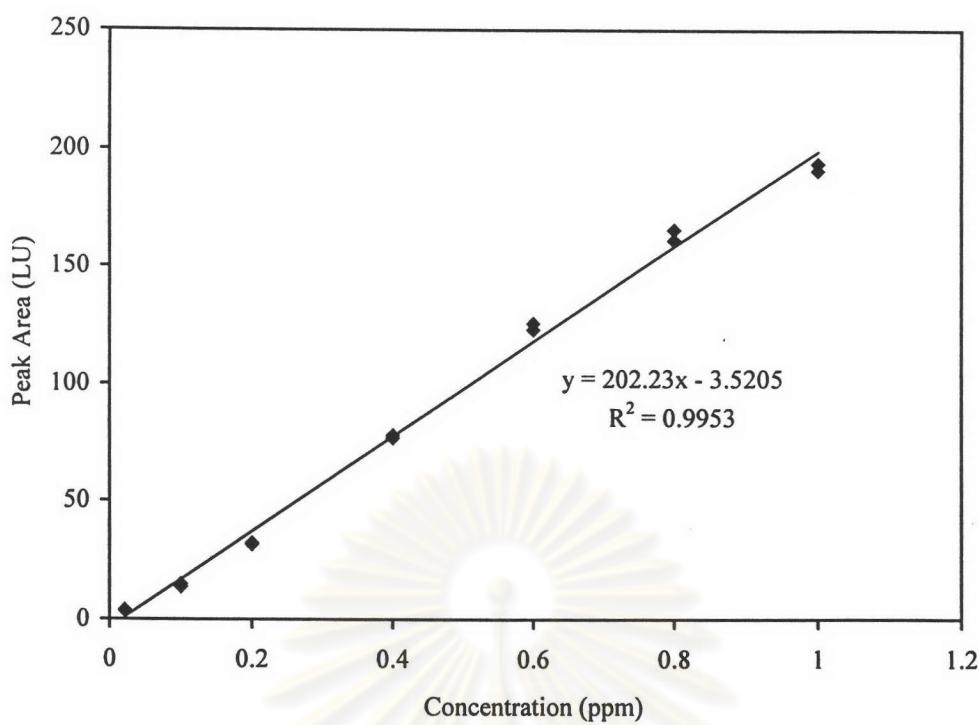


Figure B-34. Matrix calibration curve of BADGE by HPLC condition listed in Table 4.3.

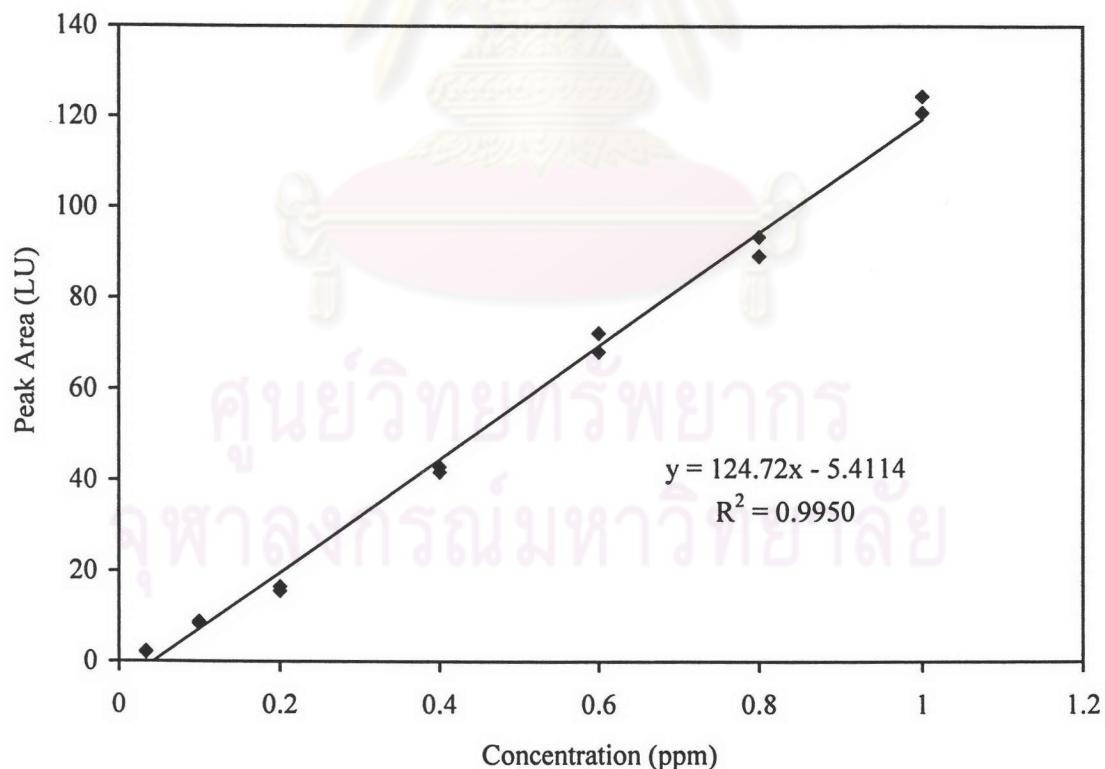


Figure B-35. Matrix calibration curve of BADGE.HCl by HPLC condition listed in Table 4.3.

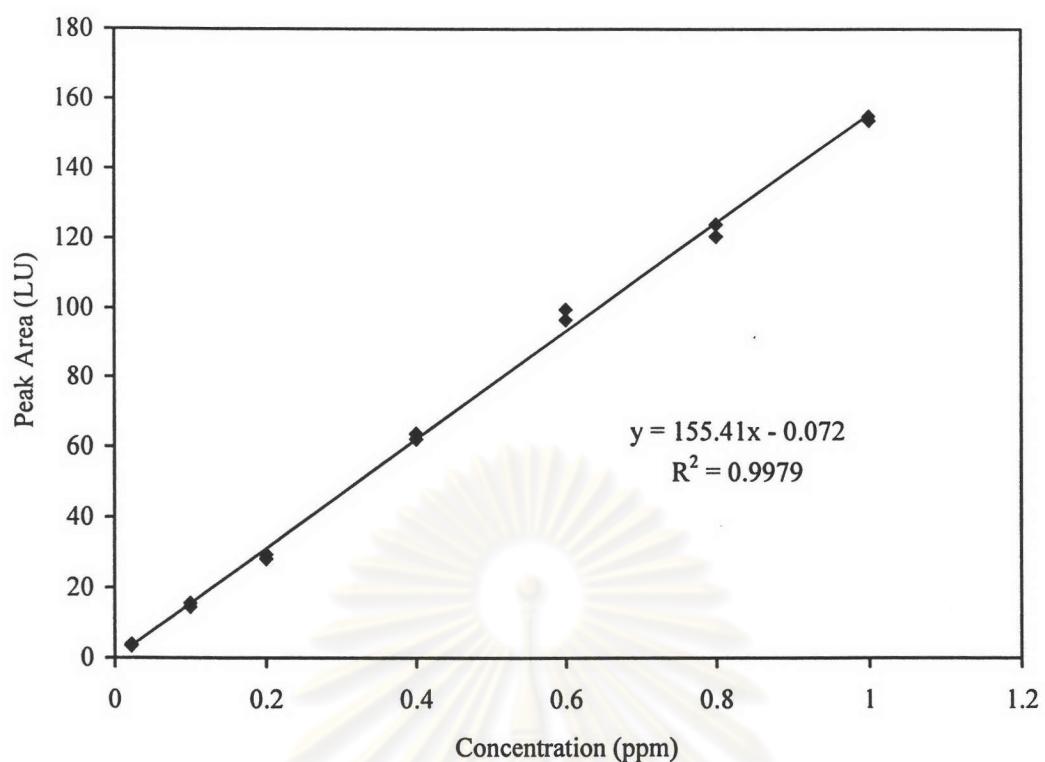


Figure B-36. Matrix calibration curve of BADGE.2HCl by HPLC condition listed in Table 4.3.

APPENDIX C

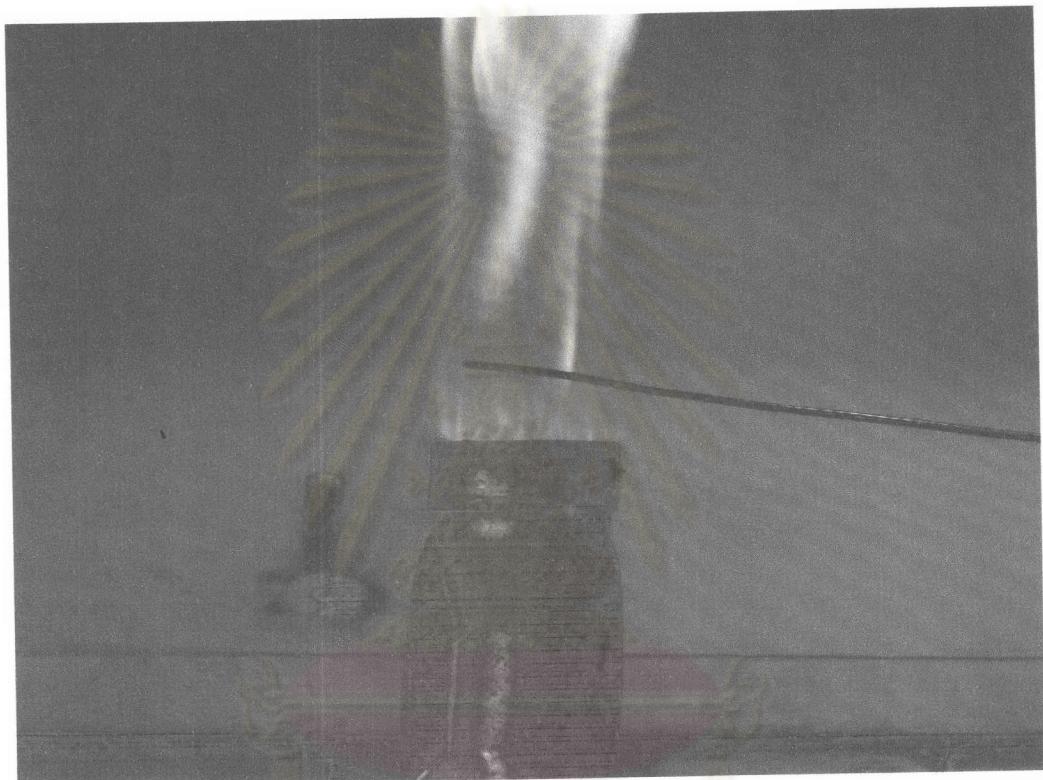


Figure C-1. Beilstein-negative test of can coatings.

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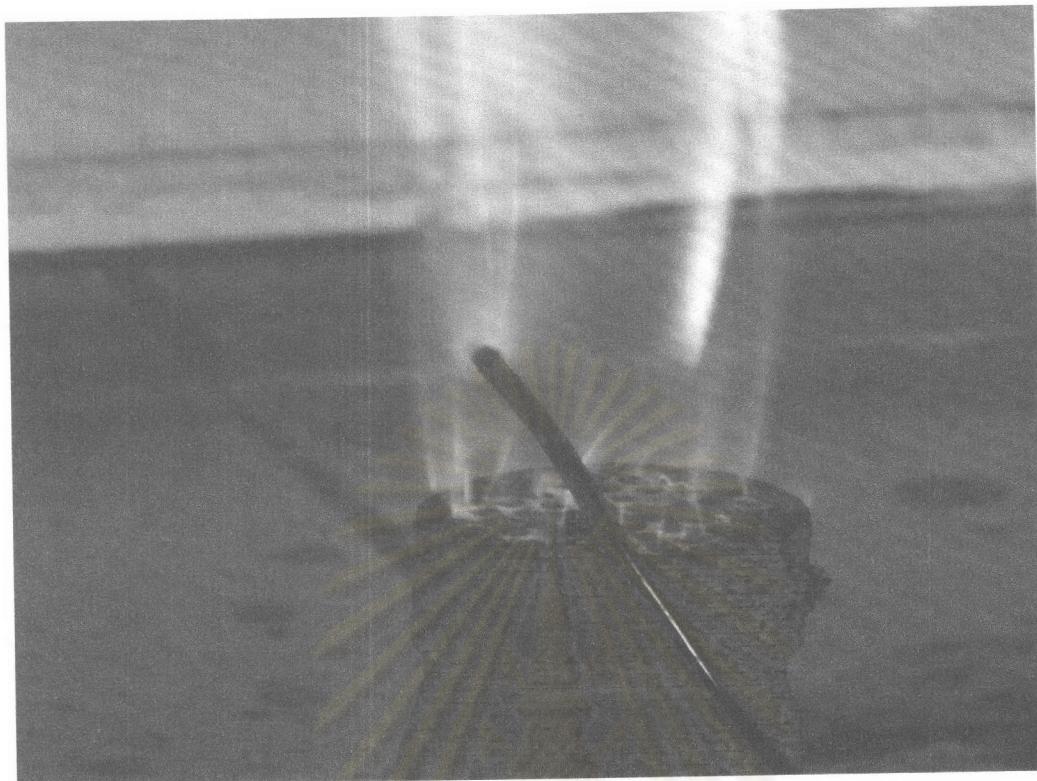


Figure C-2. Beilstein-positive test of can coatings.

APPENDIX D

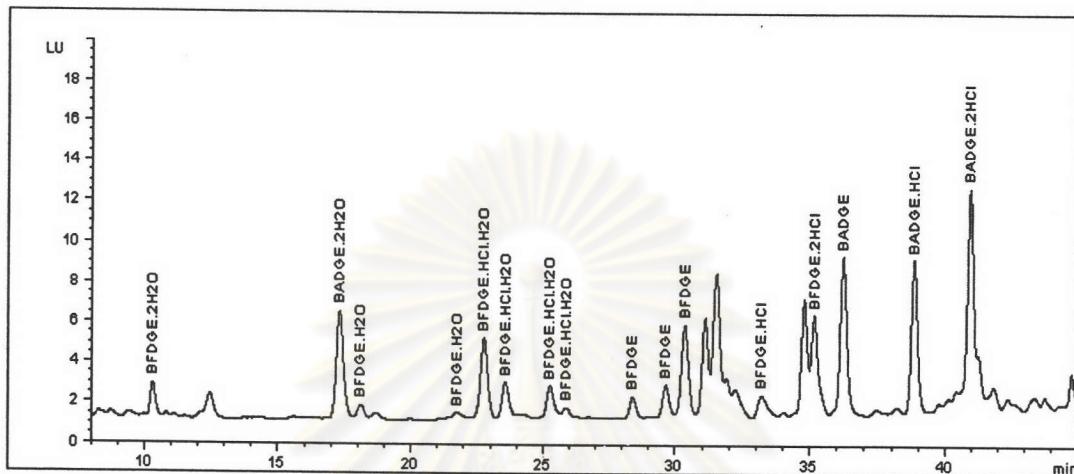


Figure D-1. Chromatogram of sardines in tomato (sample no. 2).

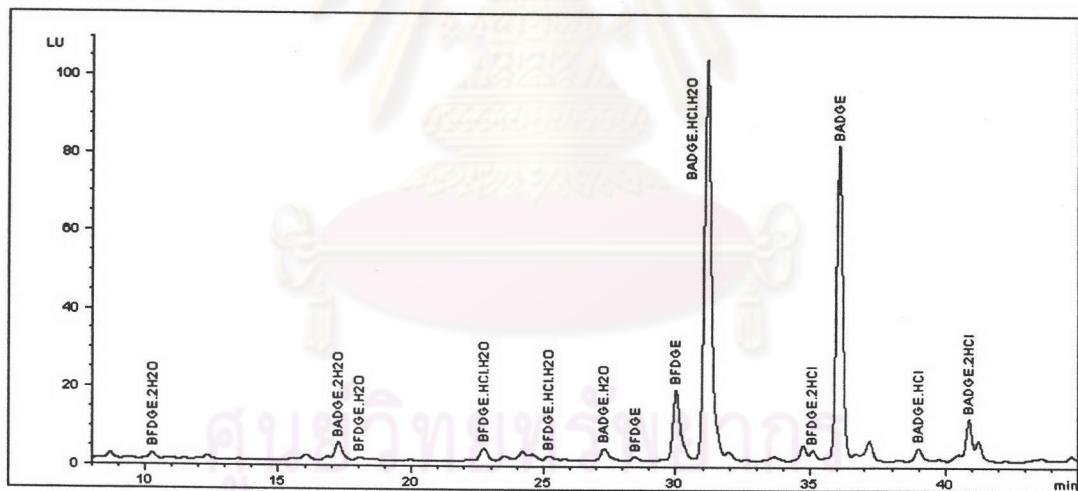


Figure D-2. Chromatogram of green curry fried sardines (sample no. 9).

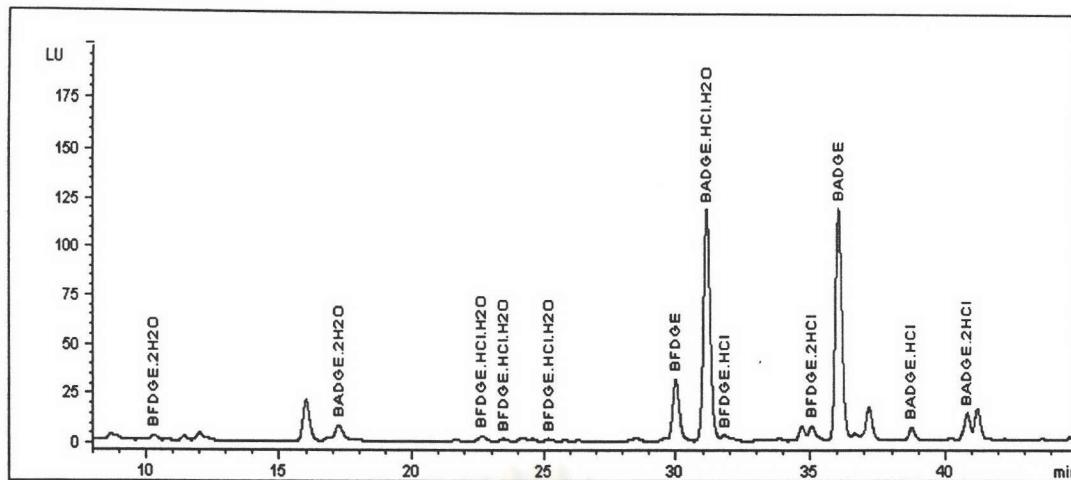


Figure D-3. Chromatogram of Tom-Yum sardines (sample no. 12).

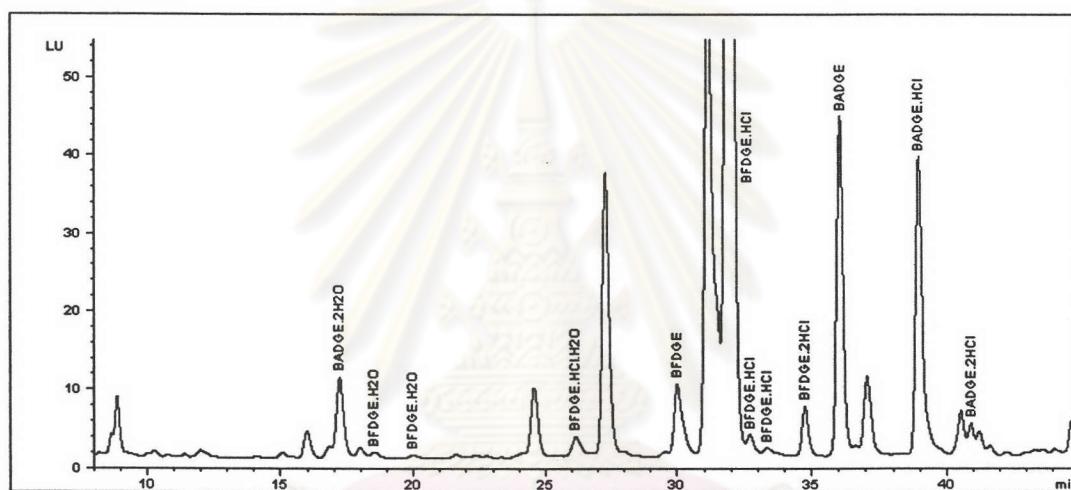


Figure D-4. Chromatogram of pork green curry (sample no.13).

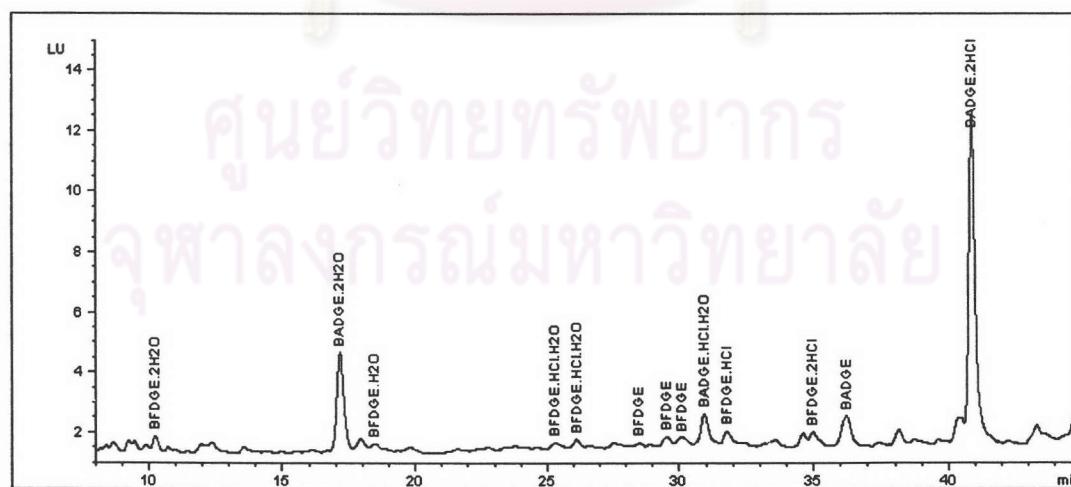


Figure D-5. Chromatogram of tuna steak (sample no. 15).

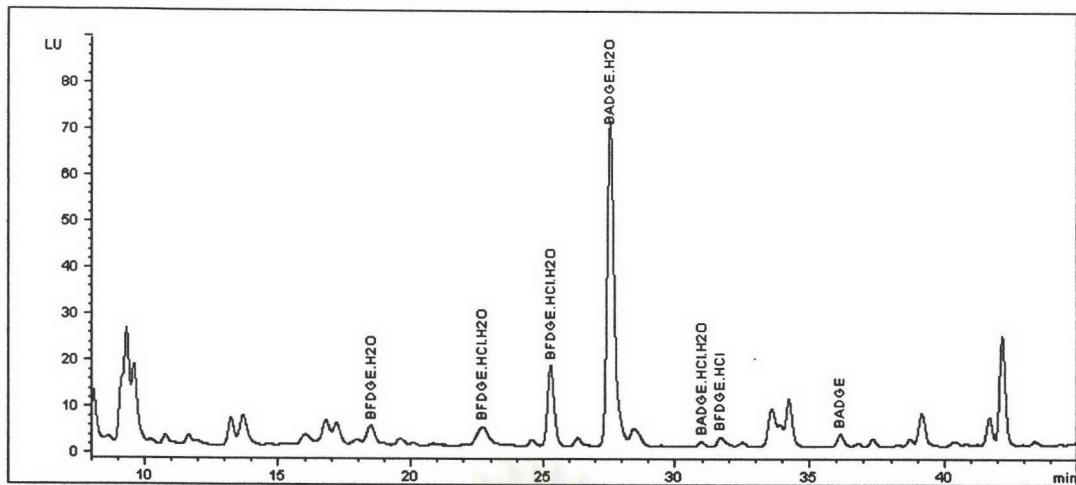


Figure D-6. Chromatogram of tuna with ginger (sample no. 17).

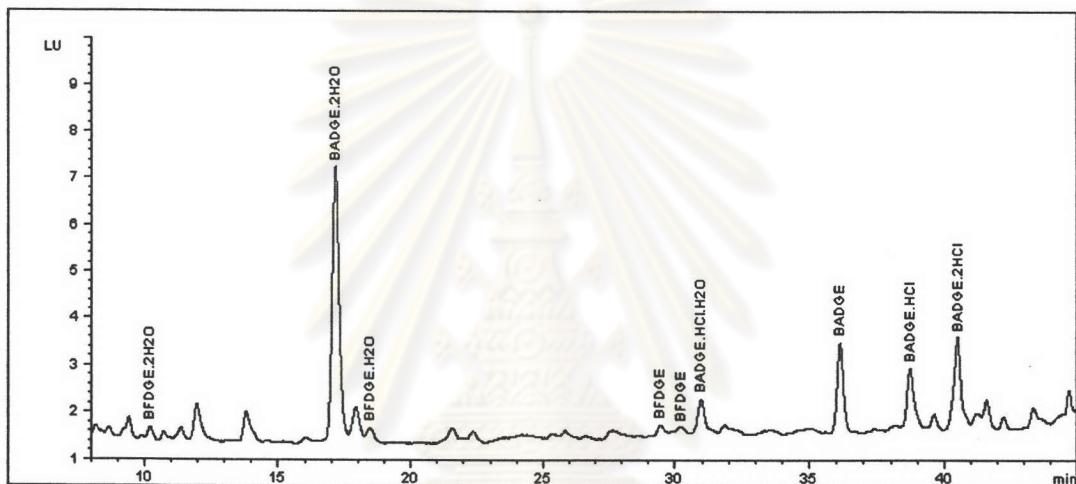


Figure D-7. Chromatogram of seasoned vegetarian bamboo shoot with mushroom (sample no. 19).

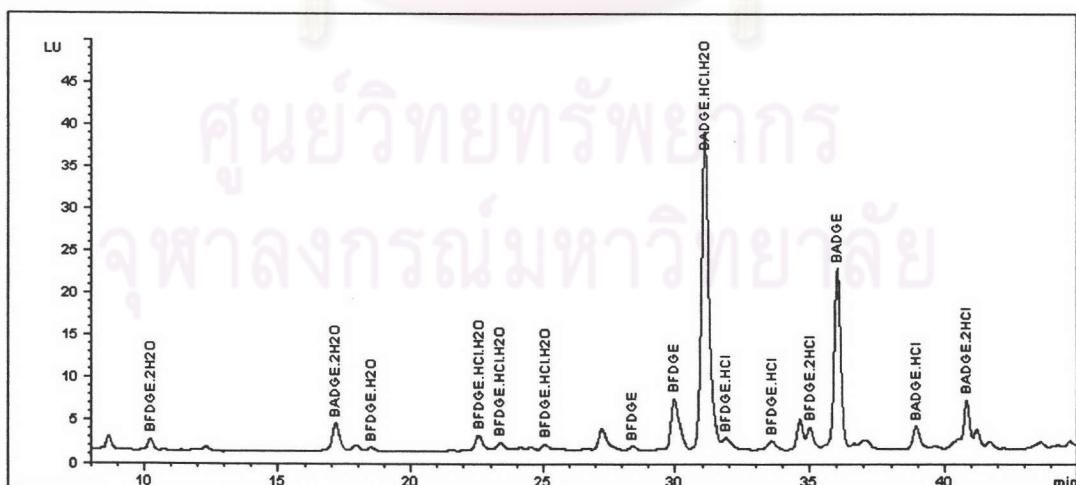


Figure D-8. Chromatogram of Chuchee sardines (sample no. 24).

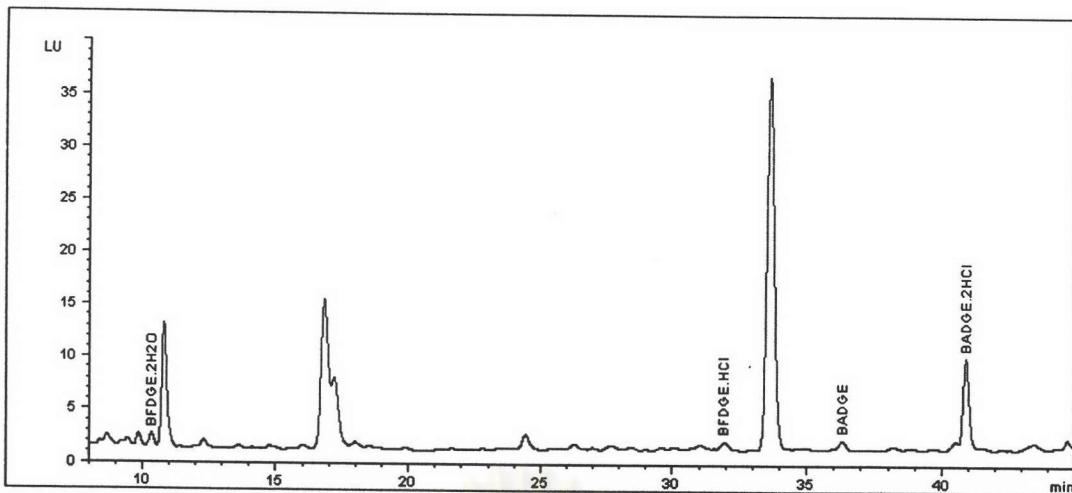


Figure D-9. Chromatogram of vegetarian Palc soup (sample no. 25).

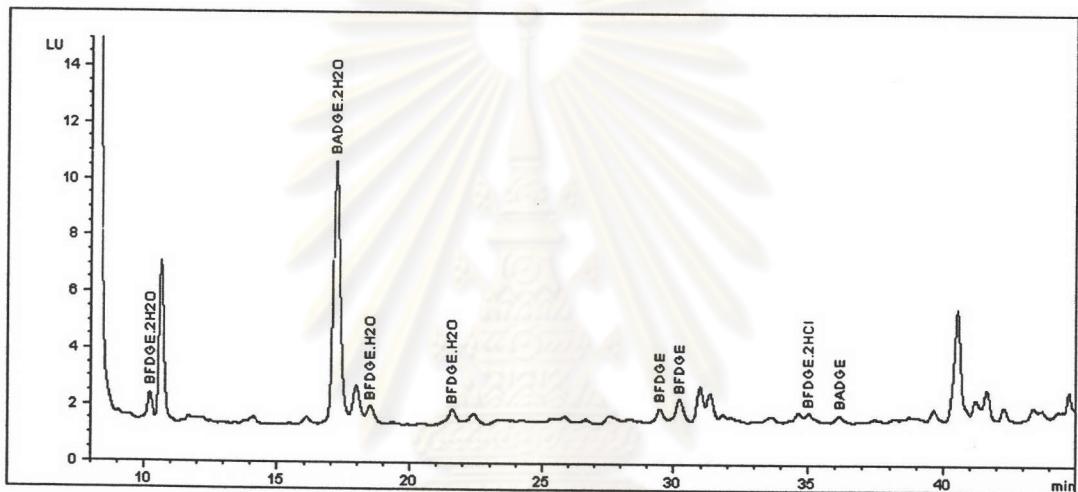


Figure D-10. Chromatogram of seasoned vegetarian cabbage with mushroom (sample no. 27).

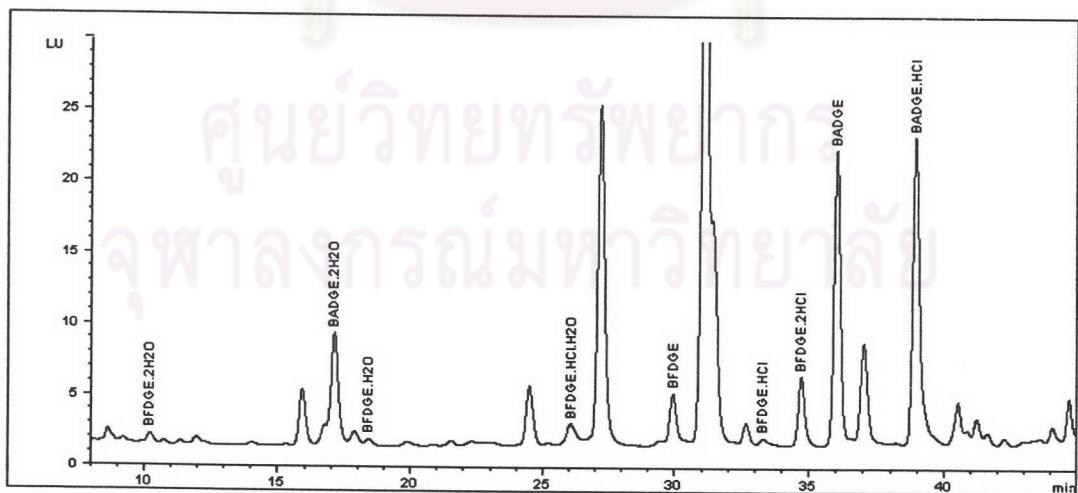


Figure D-111. Chromatogram of chicken red thick curry (sample no. 29).

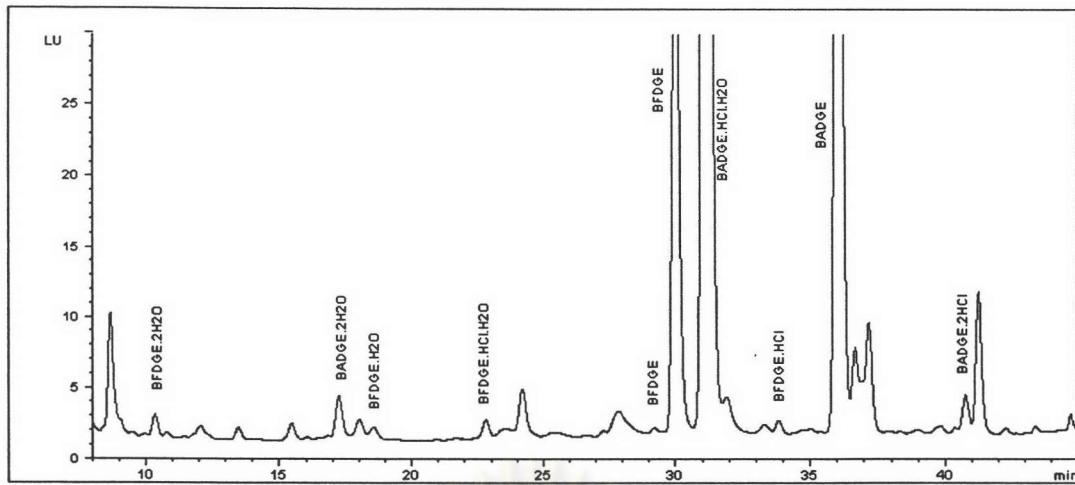


Figure D-12. Chromatogram of Namprik tuna (sample no. 31).

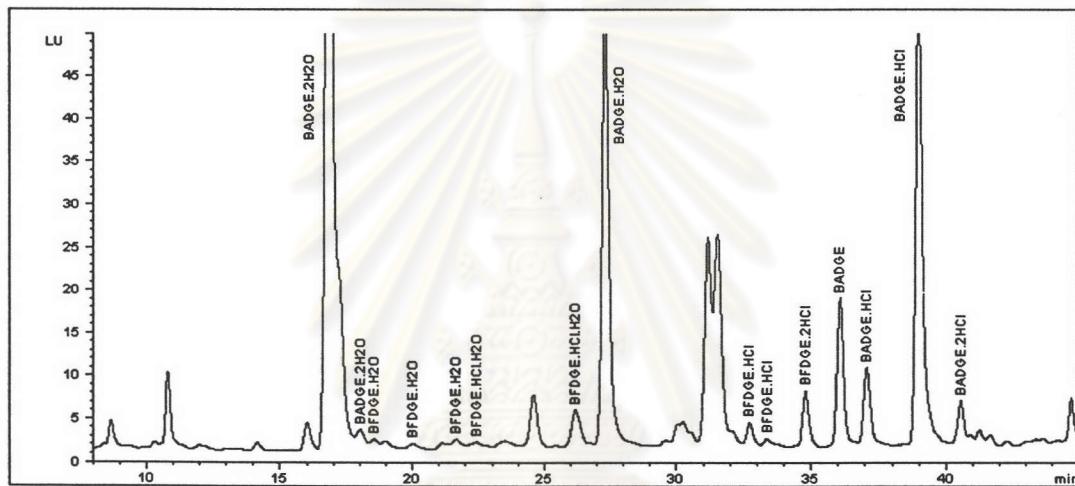


Figure D-13. Chromatogram of beef Masman curry (sample no. 34).

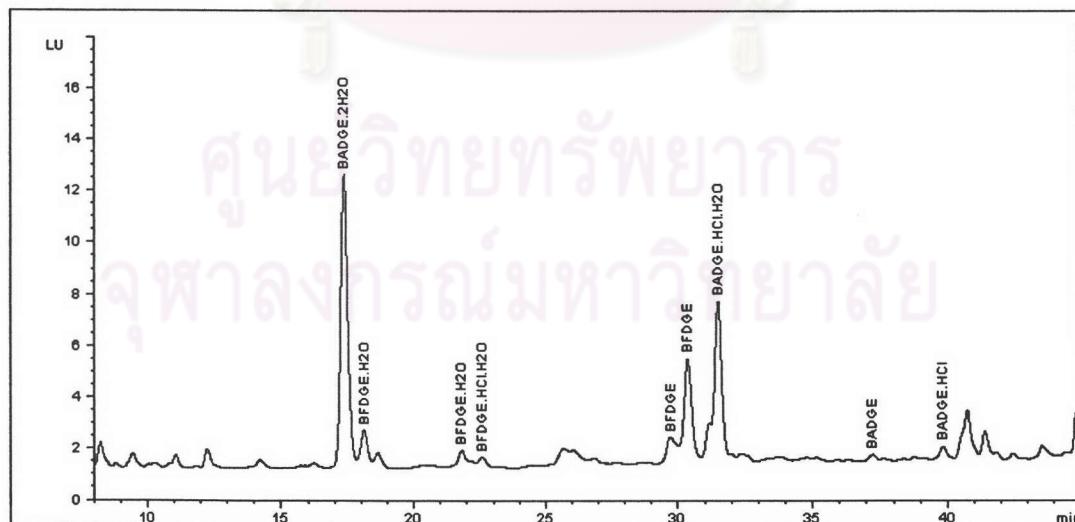


Figure D-14. Chromatogram of tuna steak in brine (sample no. 35).

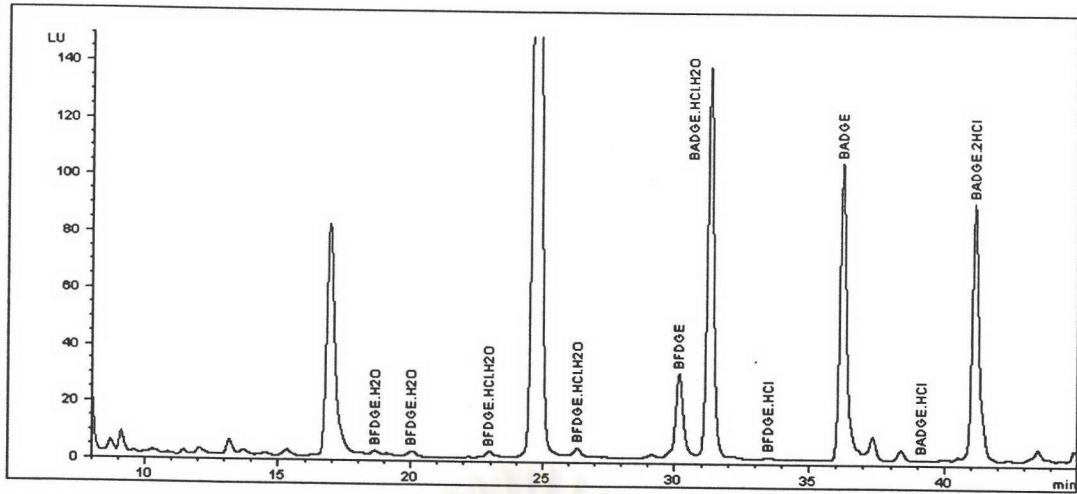


Figure D-15. Chromatogram of tuna with chilli basil leaf (sample no. 39).

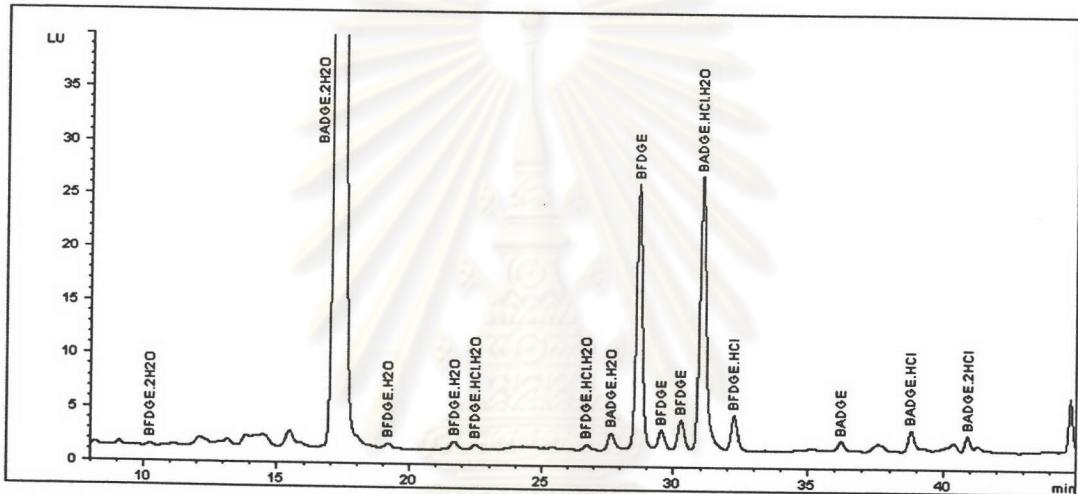


Figure D-16. Chromatogram of orange juice (sample no. 1).

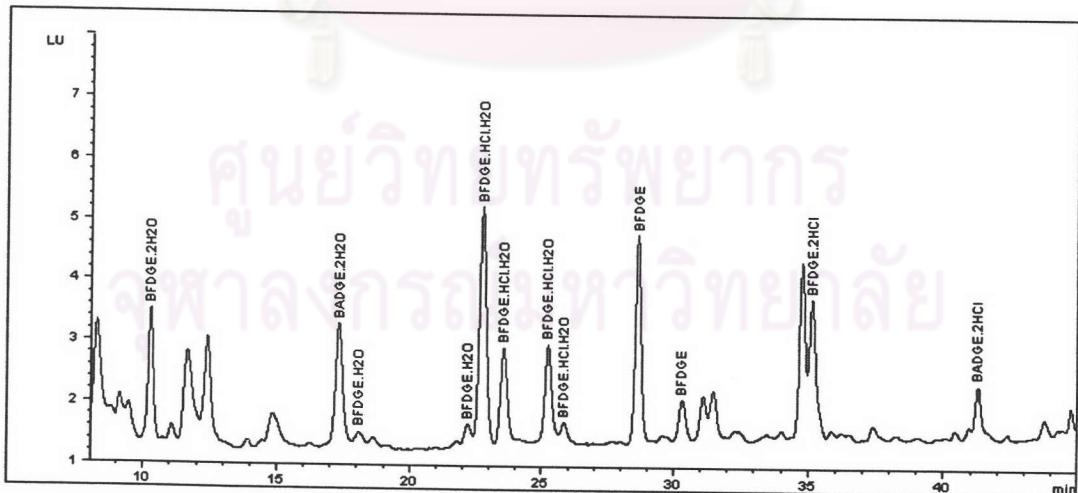


Figure D-17. Chromatogram of tomato juice (sample no. 5).

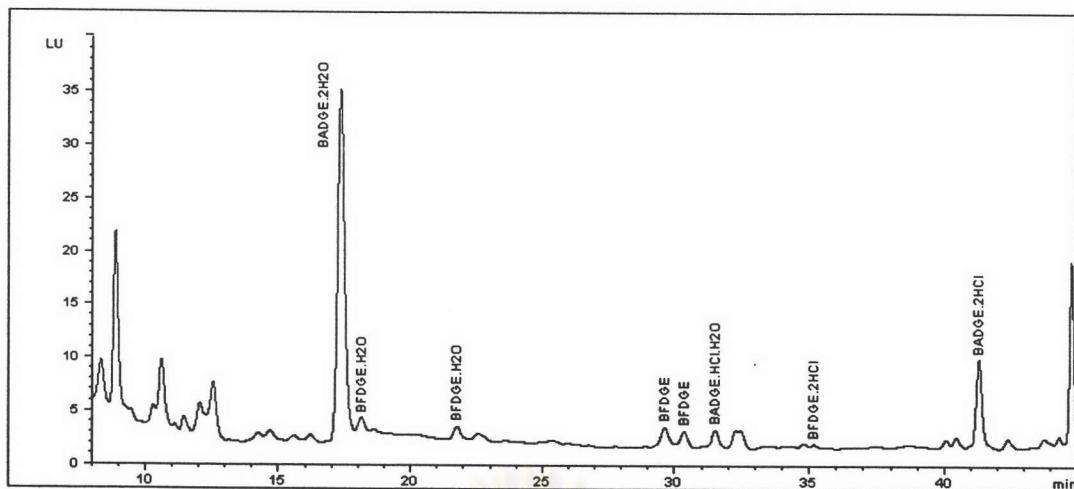


Figure D-18. Chromatogram of canned coffee (sample no. 9).

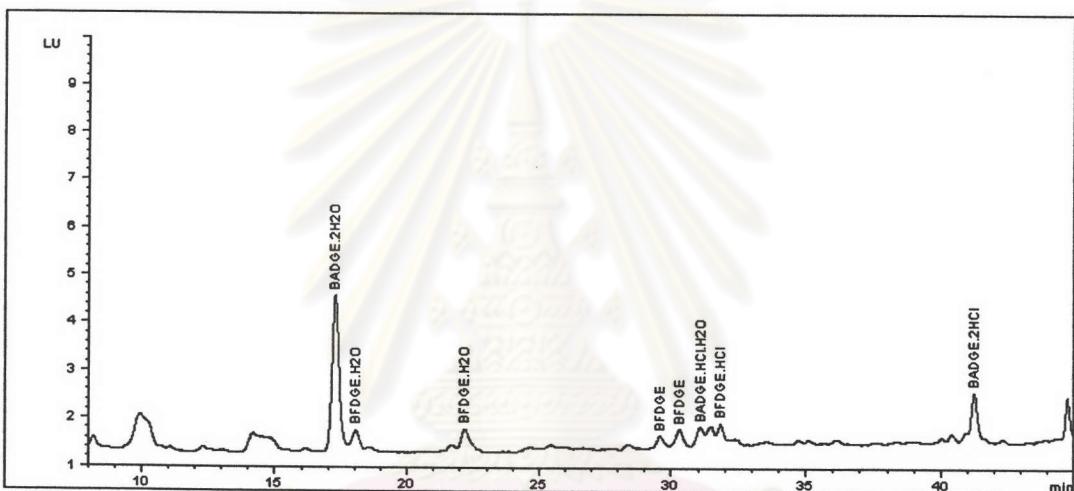


Figure D-19. Chromatogram of lychee in heavy syrup (sample no. 13).

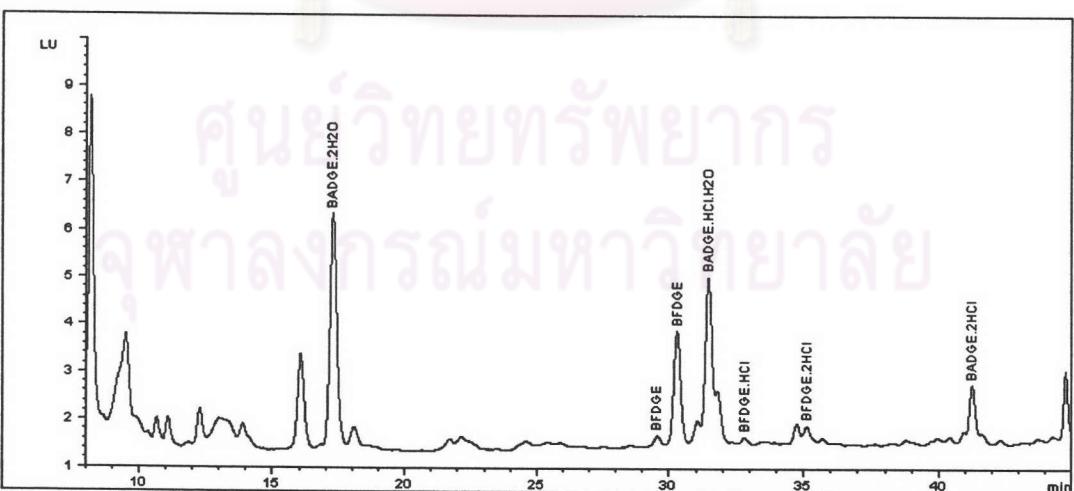


Figure D-20. Chromatogram of mustard green leaf (sample no. 17).

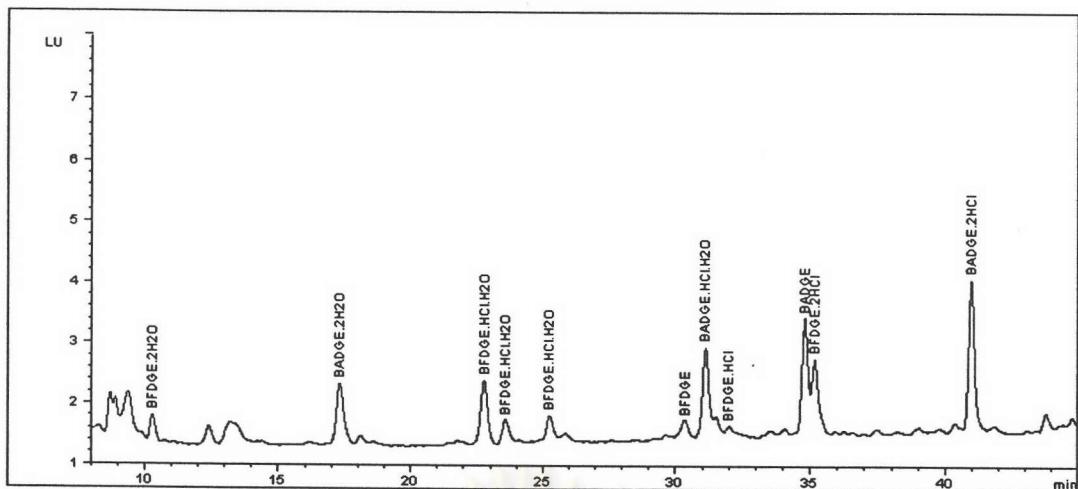


Figure D-21. Chromatogram of rumbutan in syrup (sample no. 24).

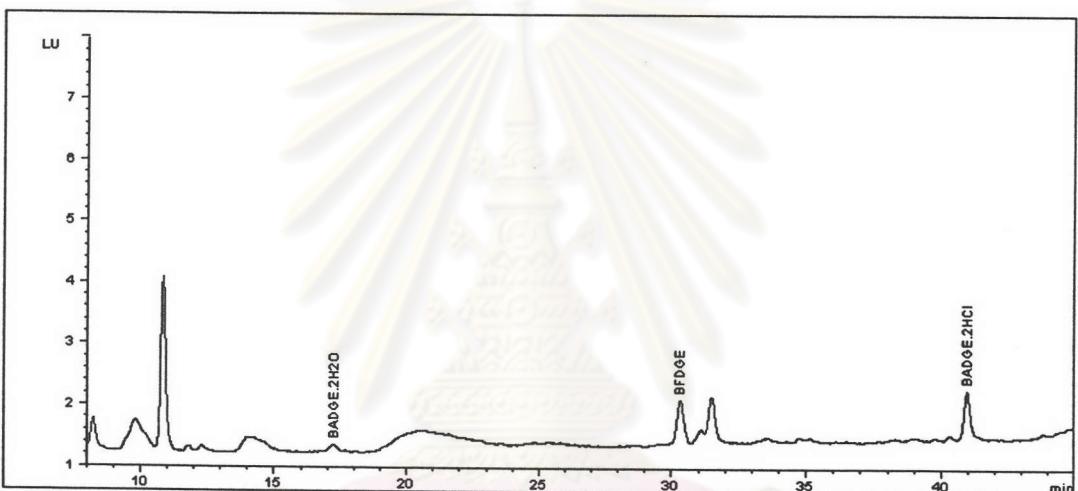


Figure D-22. Chromatogram of a carbonated beverage (sample no. 25).

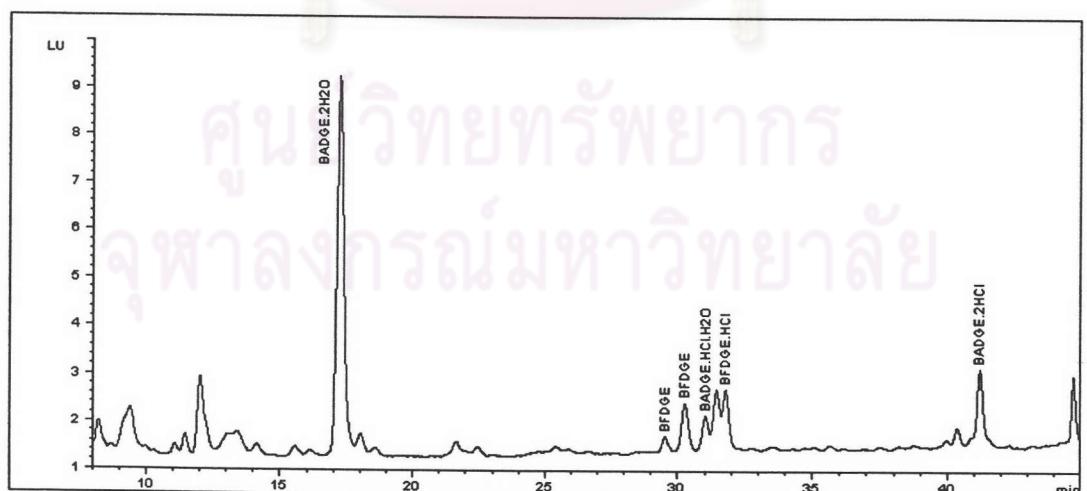


Figure D-23. Chromatogram of young sweet corn in brine (sample no. 29).

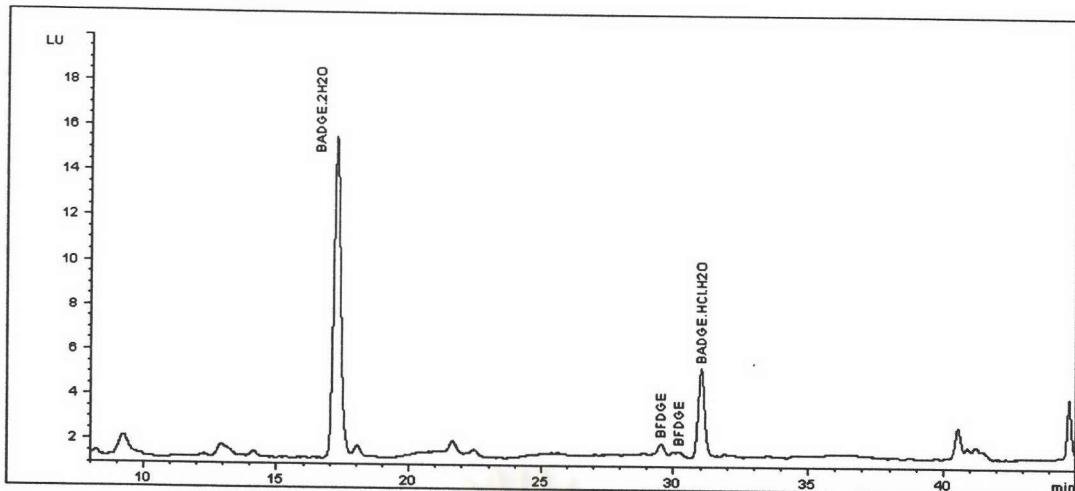


Figure D-24. Chromatogram of champignon mushrooms in brine (sample no. 34).

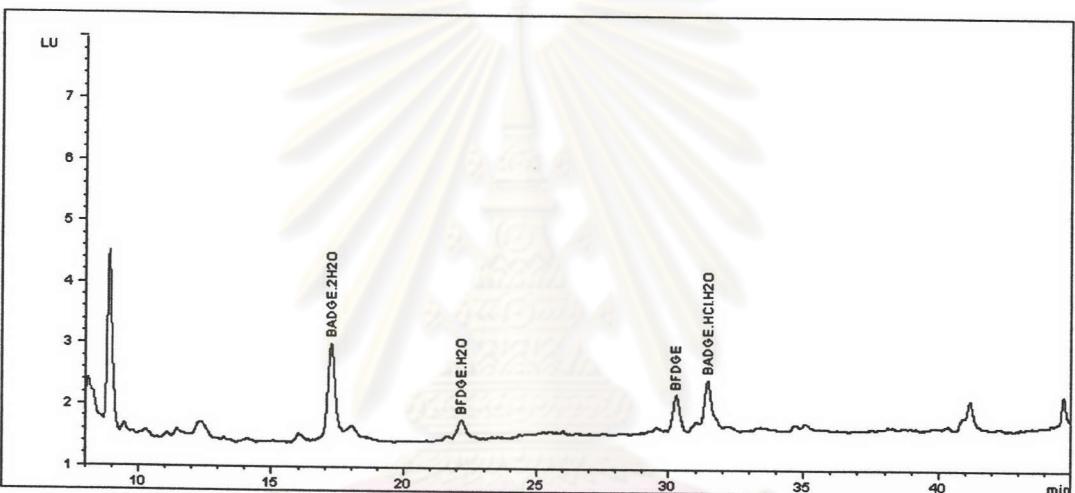


Figure D-25. Chromatogram of pineapple pieces in syrup (sample no. 36).

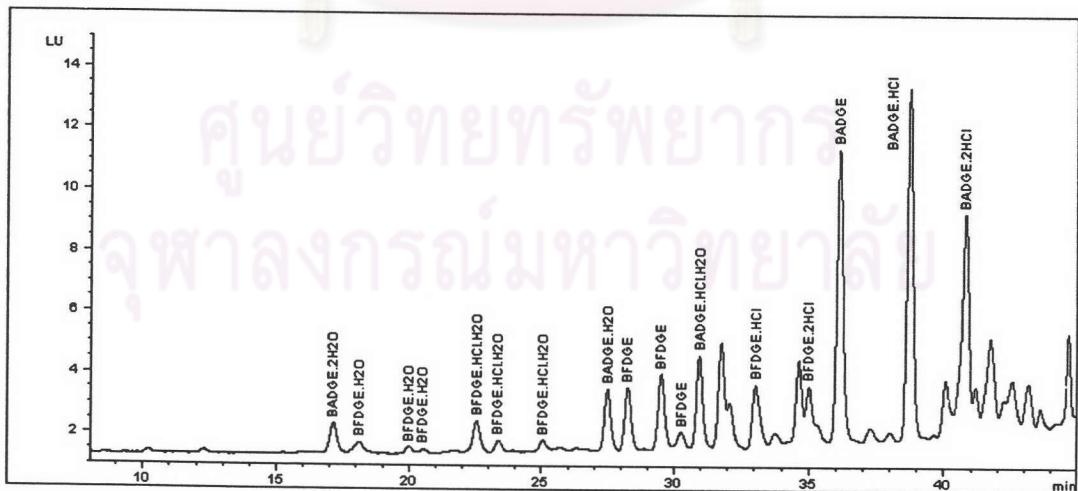


Figure D-26. Chromatogram of can coating extract (no. 2, oil-in-water).

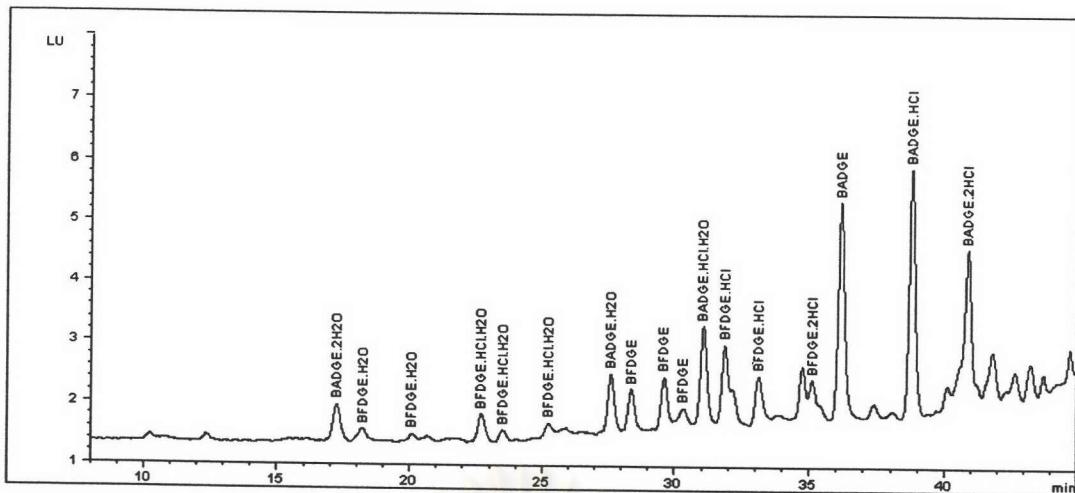


Figure D-27. Chromatogram of can coating extract (no. 24, oil-in-water).

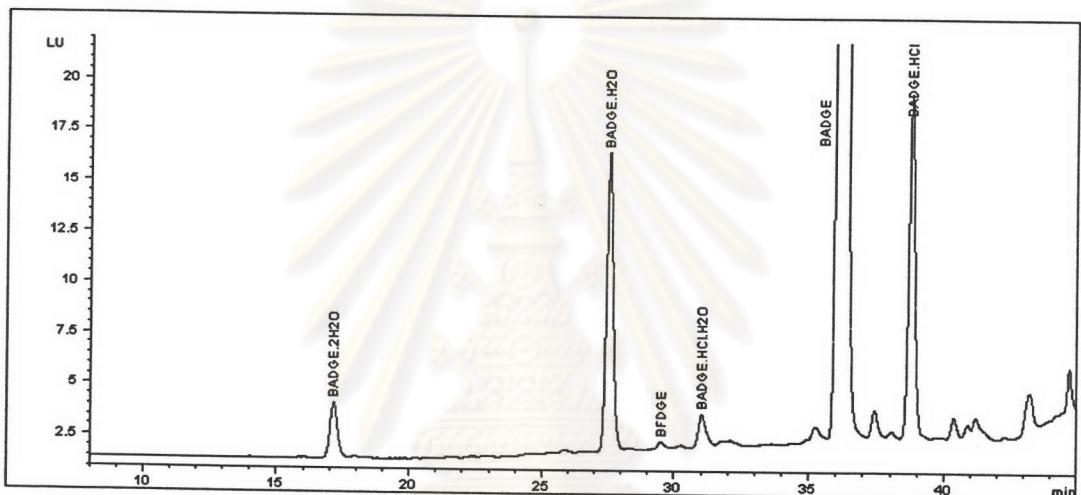


Figure D-28. Chromatogram of can coating extract (no. 2, aqueous).

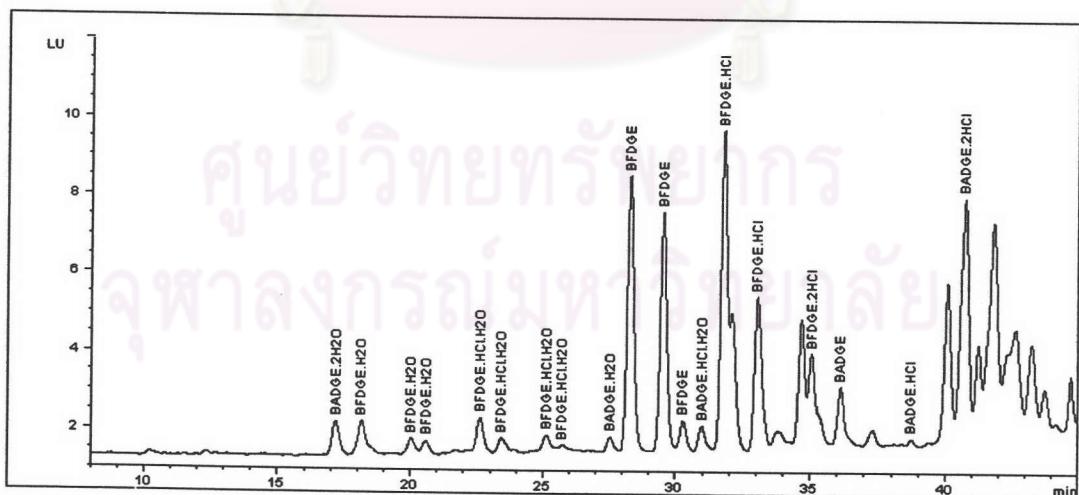


Figure D-29. Chromatogram of can coating extract (no. 5, aqueous).

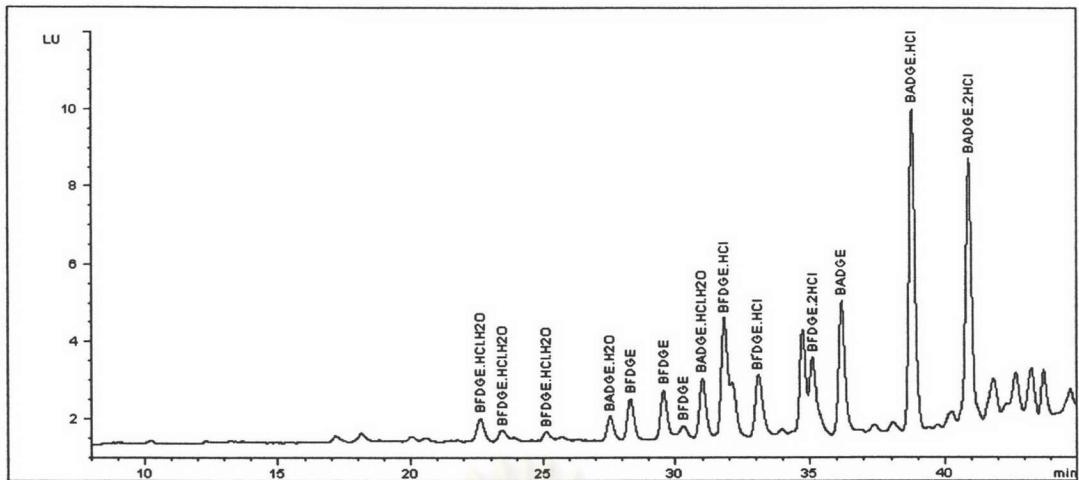


Figure D-30. Chromatogram of can coating extract (no. 23, aqueous).

VITA

Miss Ornthida Khow was born on January 25, 1980, in Nakorn Sri Thummarat, Thailand. She received a Bachelor Science Degree in Chemistry (second class honours) from the Faculty of Science, Chulalongkorn University in 2001. After that, she continued her graduate work in Analytical Chemistry, concentration in chromatography and separations, at the Department of Chemistry, Faculty of Science, Chulalongkorn University. And will received her Master of Science Degree in July 2004.

