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APPENDIX



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## APPENDIX A

Proton nuclear magnetic resonance spectroscopy ( $^1\text{H}$  NMR)

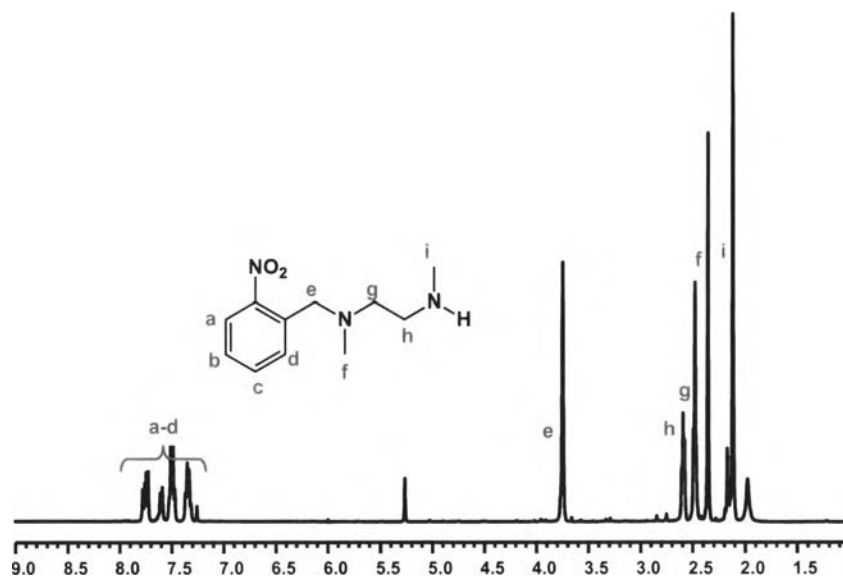


Figure A-1.  $^1\text{H}$  NMR spectrum of a mono ONB-protected diamine in  $\text{CDCl}_3$ .

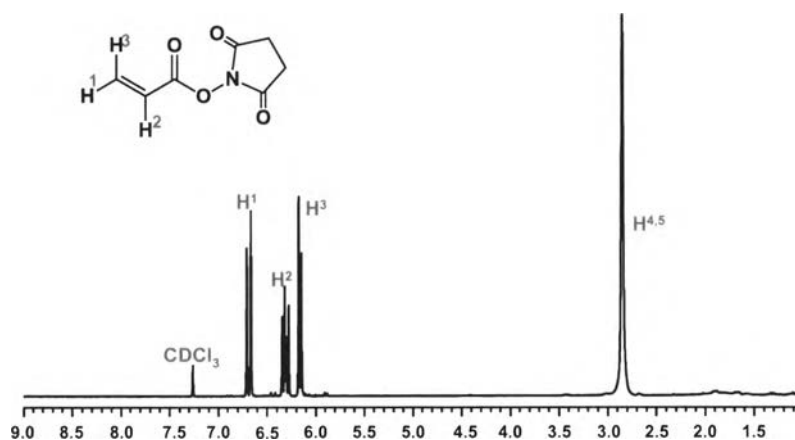


Figure A-2.  $^1\text{H}$  NMR spectrum of *N*-acryloxysuccinimide (NAS) in  $\text{CDCl}_3$ .



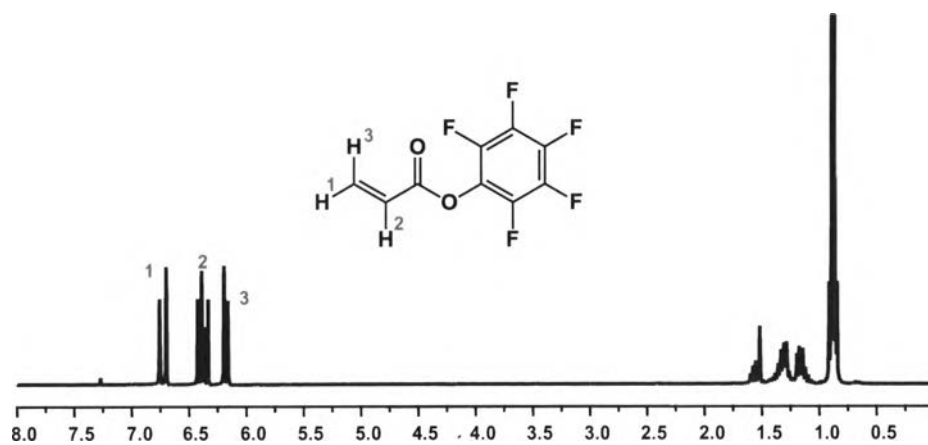


Figure A-3.  $^1\text{H}$  NMR spectrum of pentafluorophenyl acrylate (PFPA) in  $\text{CDCl}_3$ .



## APPENDIX B

## Gel Permeation Chromatography (GPC)

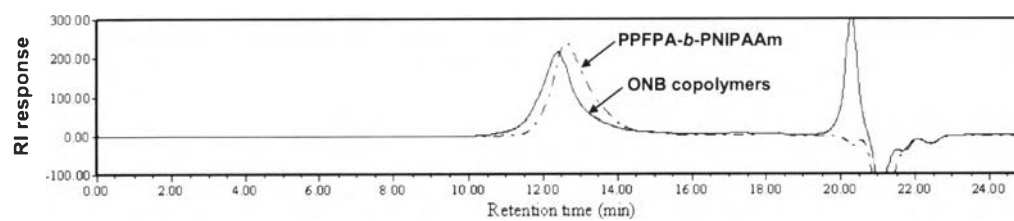


Figure B-1. GPC traces of PPFPA-*b*-PNIPAAm and ONB containing copolymers.





## VITA

Miss Wilaiporn Graisuwan was born on April 12<sup>th</sup>, 1982 in Nakhon Sri Thammarat, Thailand, She received Bachelor Degree of Science in Industrial Chemistry from the Faculty of Science and Technology, Prince of Songkla University, Pattani in 2005 and in the same year, she started as a Master Degree student with a major in Program in Petrochemistry and Polymer Science, Faculty of Science, Chulalongkorn University and completed the program in 2008. She began her PhD study in Program of Petrochemistry, Faculty of Science, Chulalongkorn University in the academic year of 2006 and graduated in the academic year of 2013.

### International Publication:

1. Graisuwan, W.; Wiarachai, O.; Ananthanawat C.; Puthong S.; Soogarun, S.; Kiatkamjornwong, S.; Hoven V. P. "Multilayer film assembled from charged derivatives of chitosan: Physical characteristics and biological responses" J. Colloid Interface Sci. 2012, 376, 177-188.
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