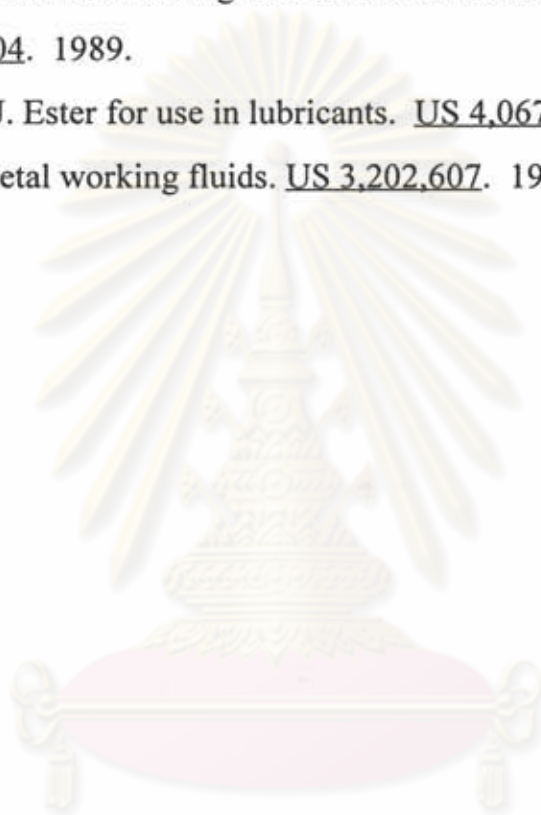


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ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย



APPENDIX

ศูนย์วิทยทรัพยากร
จุฬาลงกรณ์มหาวิทยาลัย

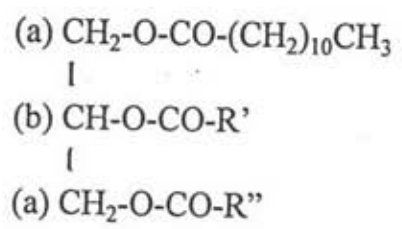
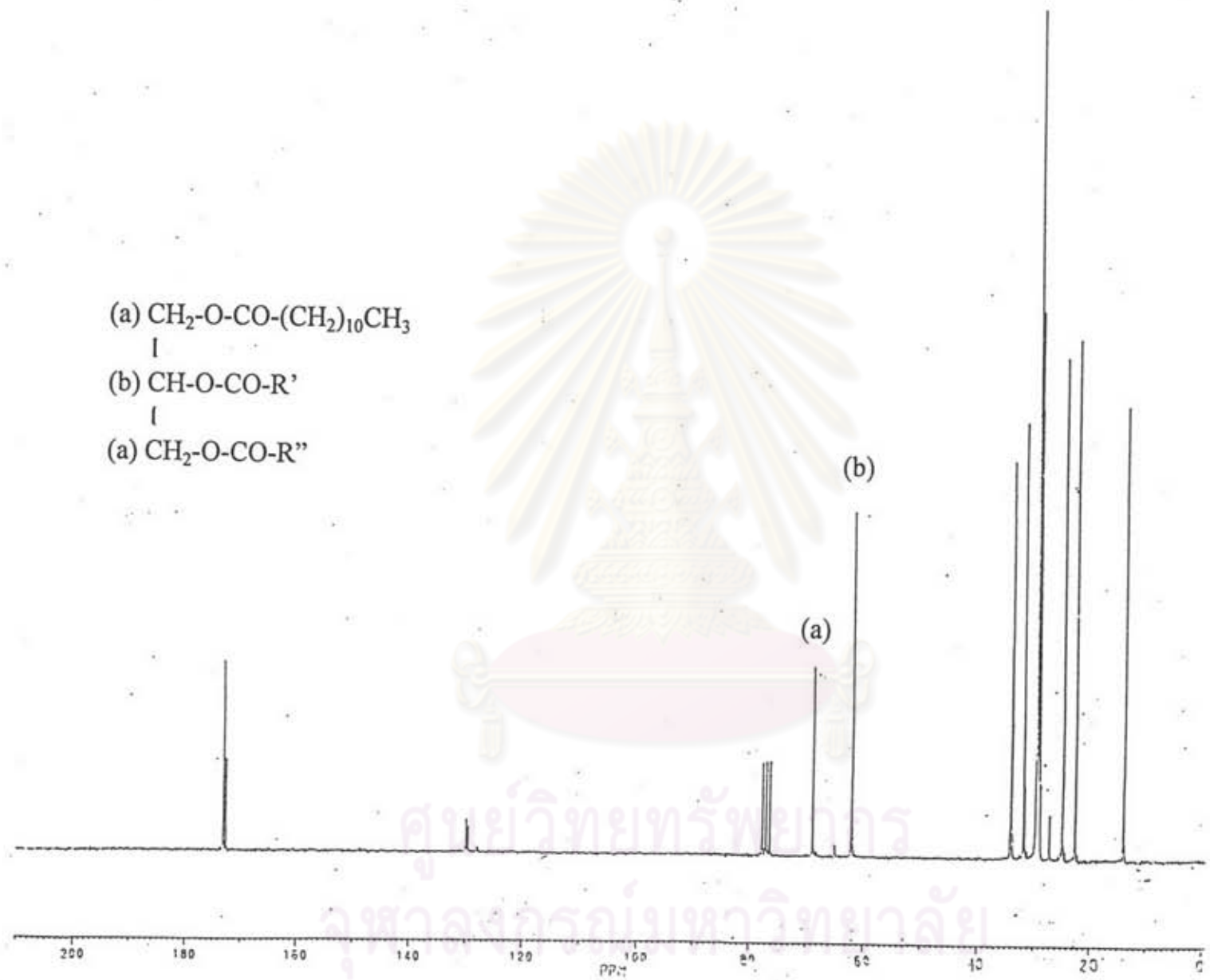


Figure A1 : ^{13}C -NMR(CDCl_3) spectrum of coconut oil

HEXANOL.

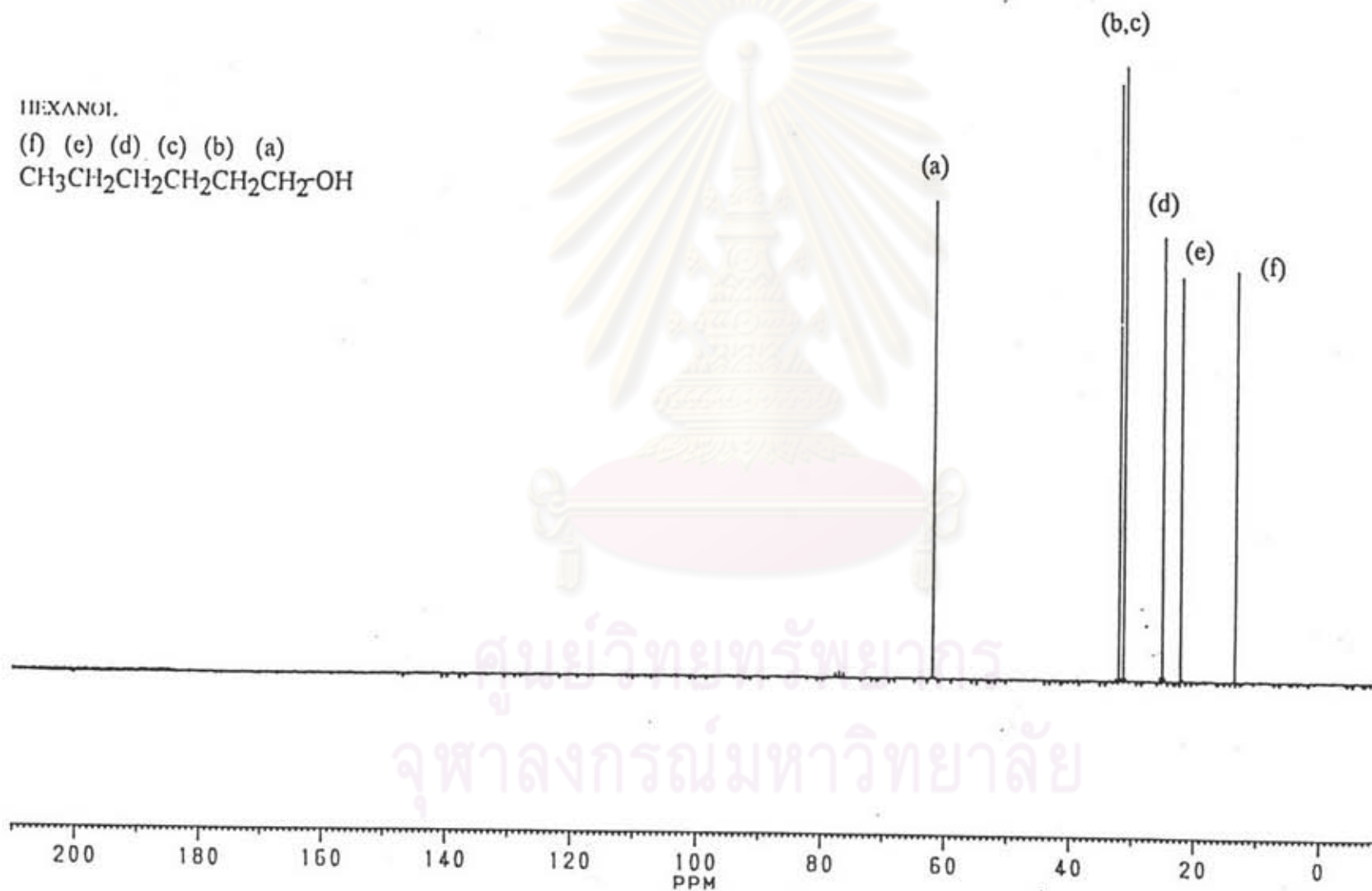
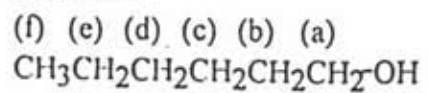


Figure A2 : ^{13}C -NMR(CDCl_3) spectrum of 1-hexanol

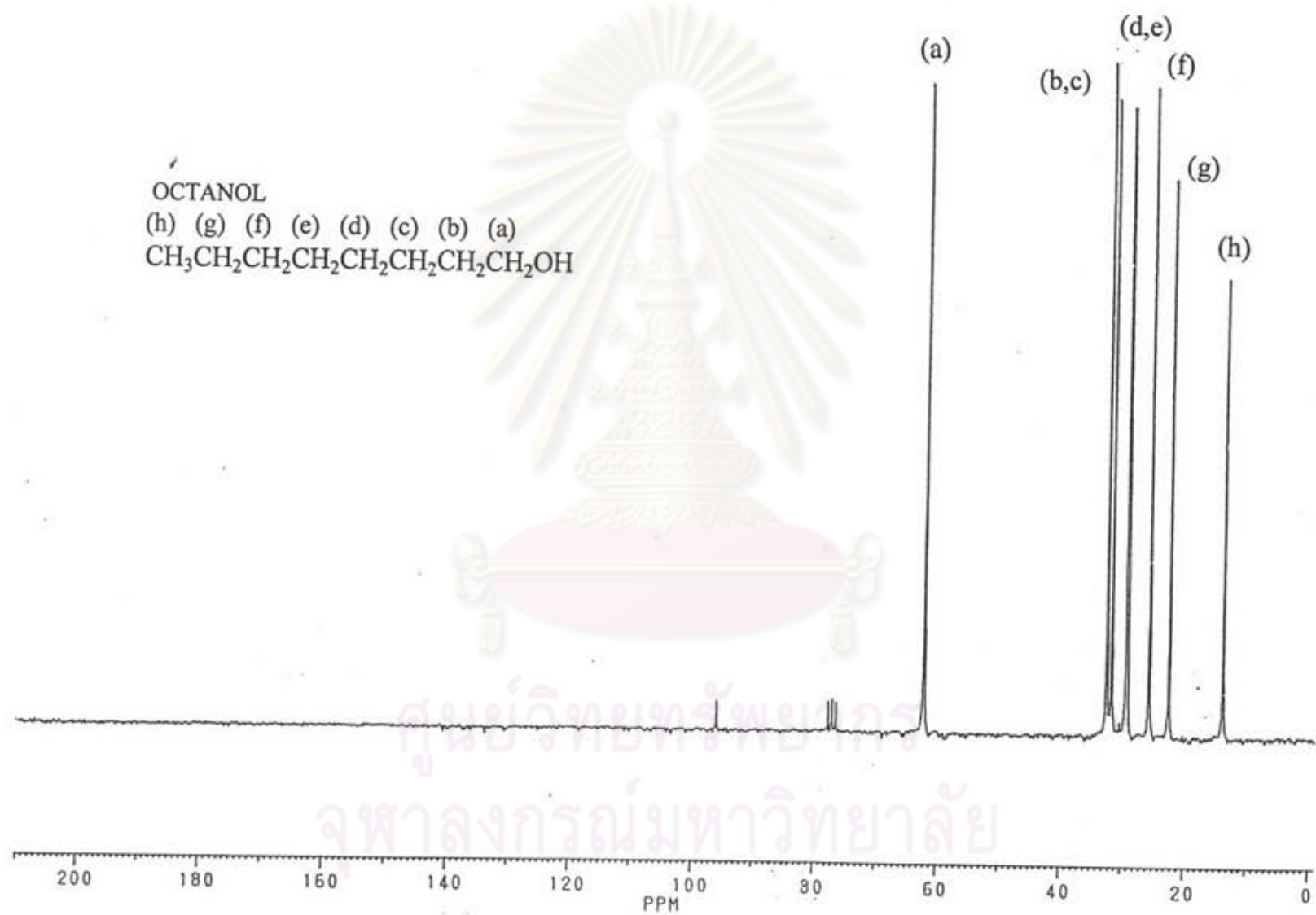


Figure A3 : $^{13}\text{C-NMR}(\text{CDCl}_3)$ spectrum of 1-octanol

2-ETHYL-1-HEXANOL

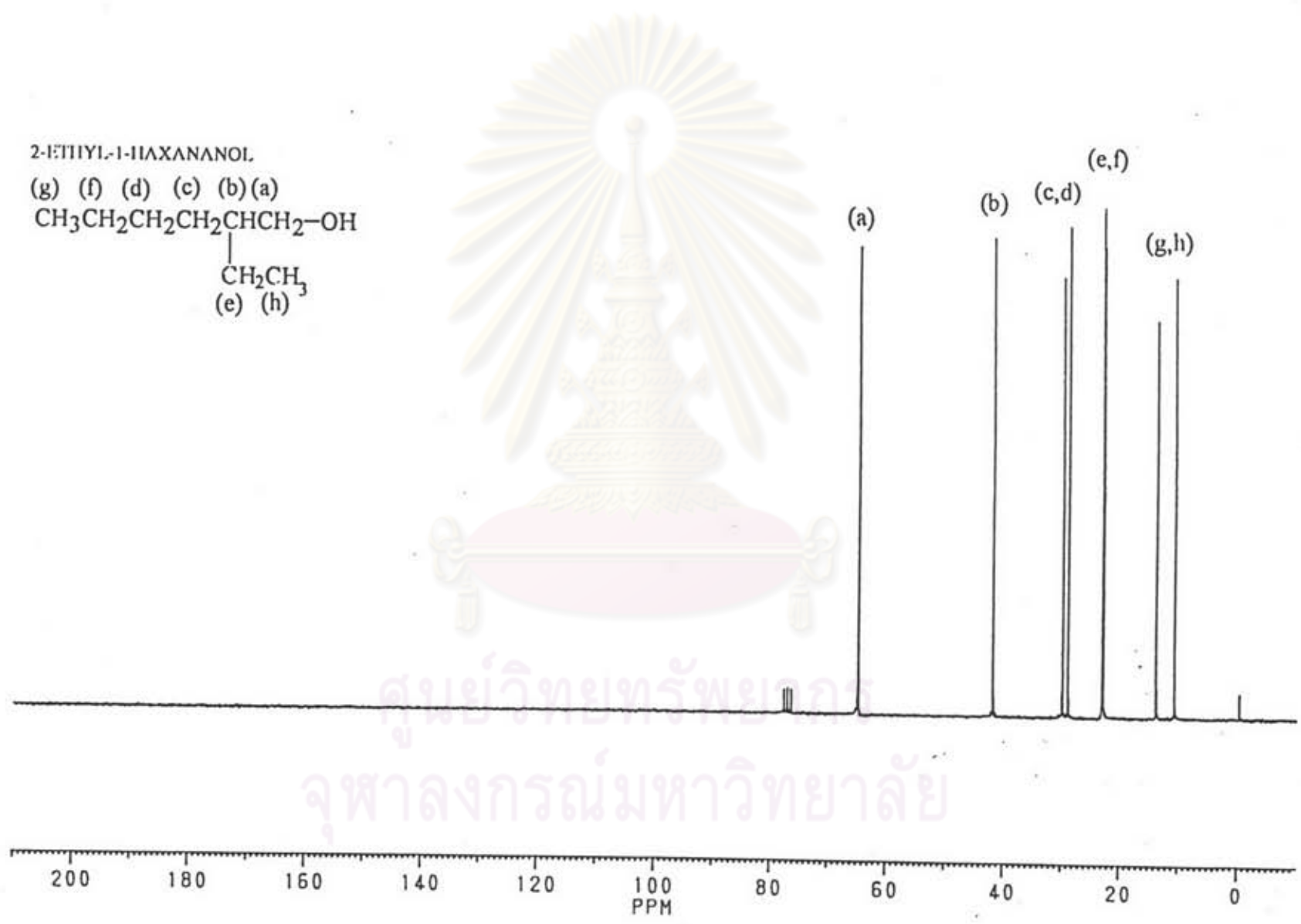
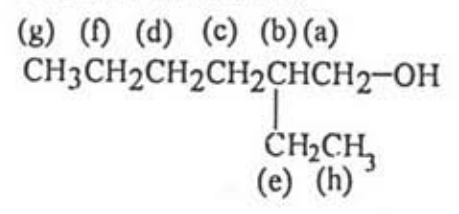


Figure A4 : ¹³C-NMR(CDCl₃) spectrum of 2-ethyl-1-hexanol

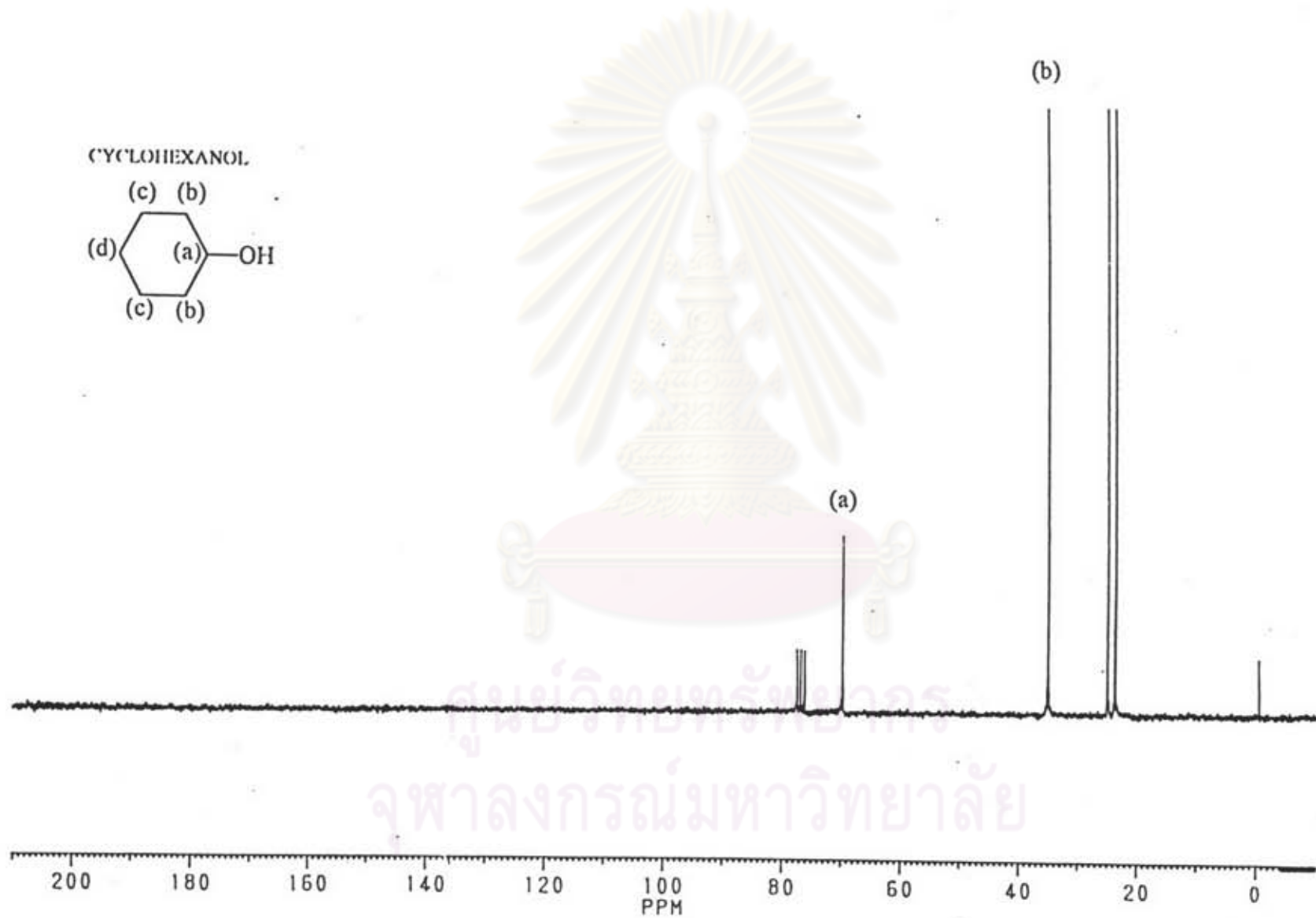


Figure A5 : ^{13}C -NMR(CDCl_3) spectrum of cyclohexanol

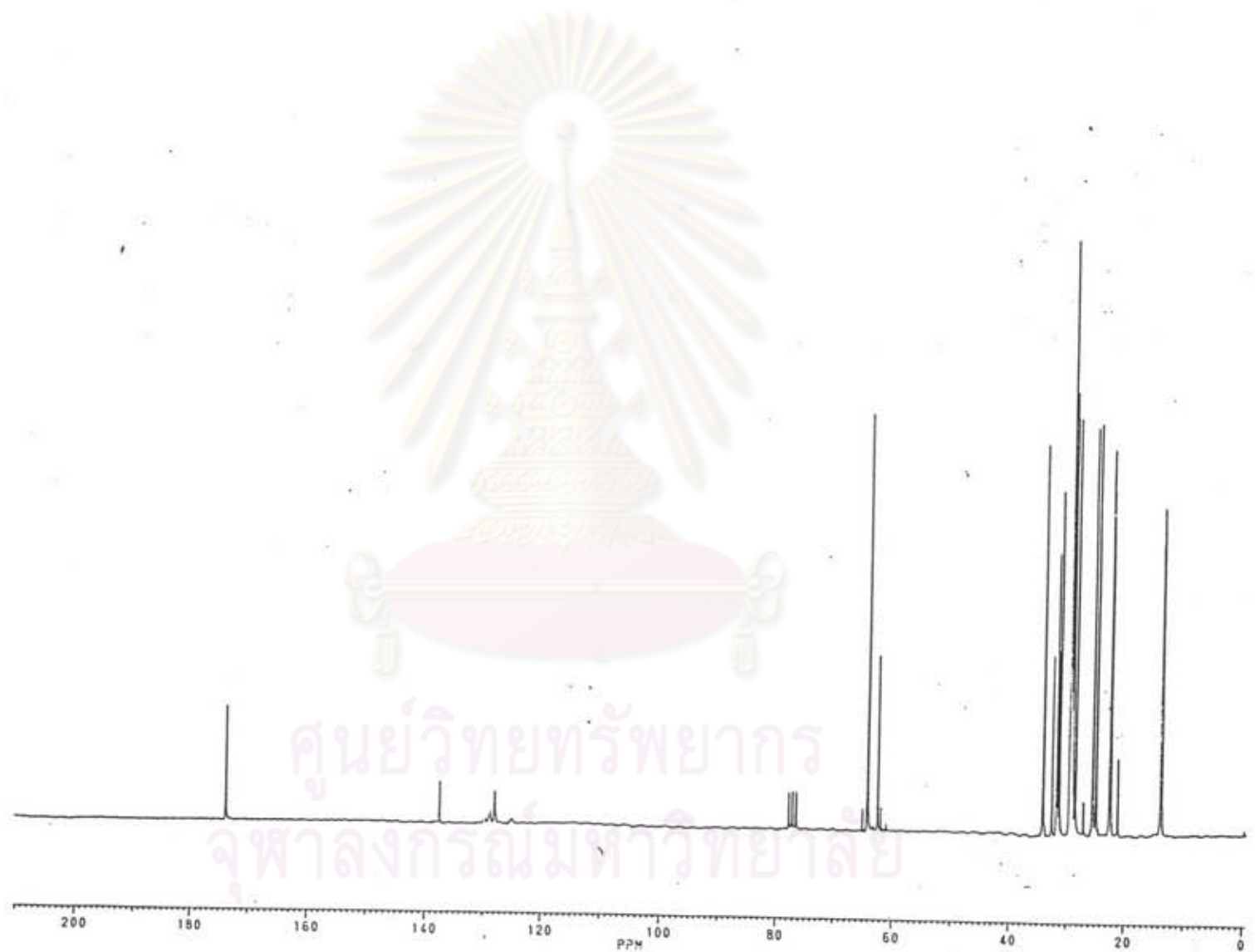


Figure A6 : ^{13}C -NMR(CDCl_3) spectrum of incompleted hexyl monoester

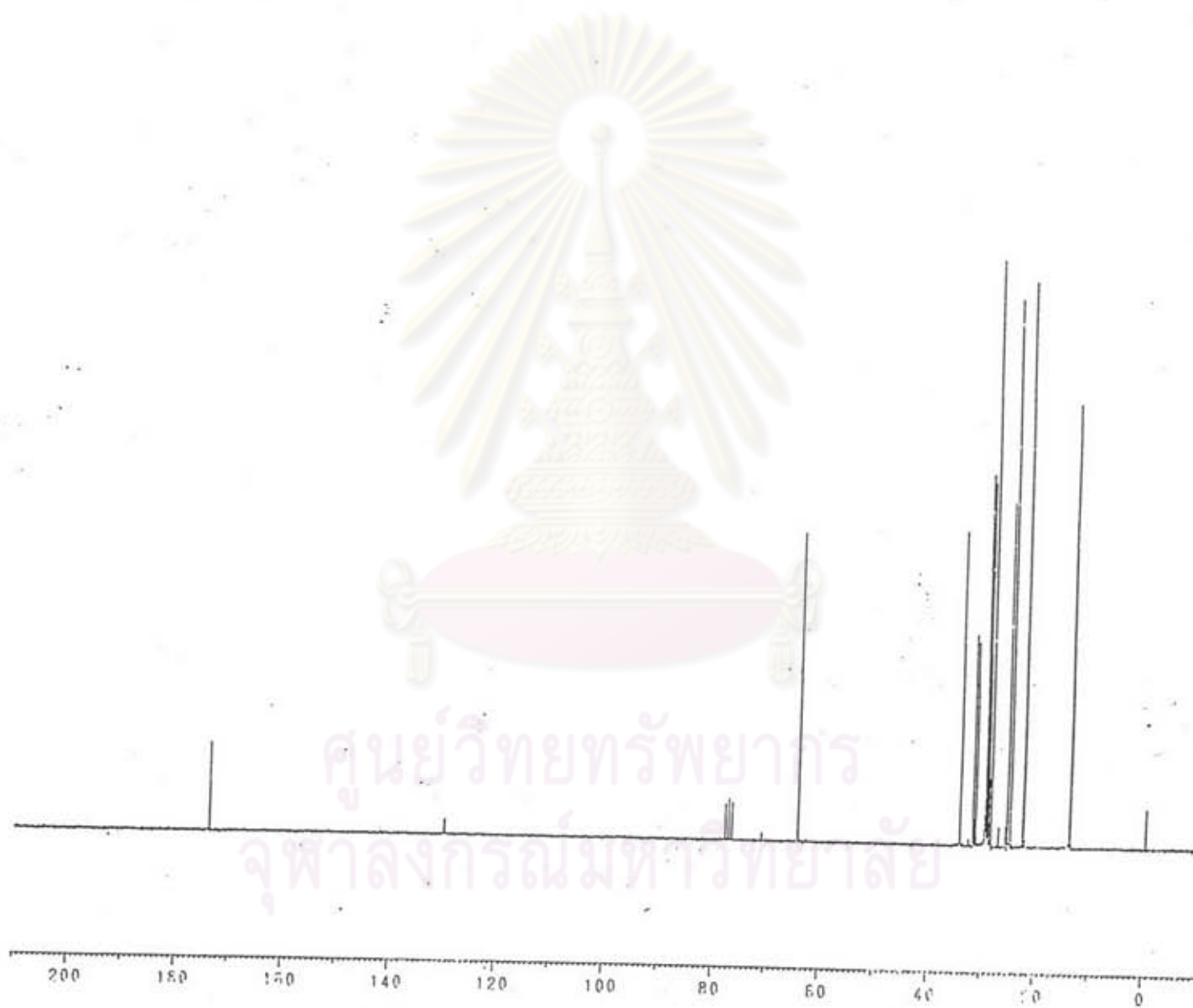


Figure A7 : ^{13}C -NMR(CDCl_3) spectrum of completed hexyl monoester

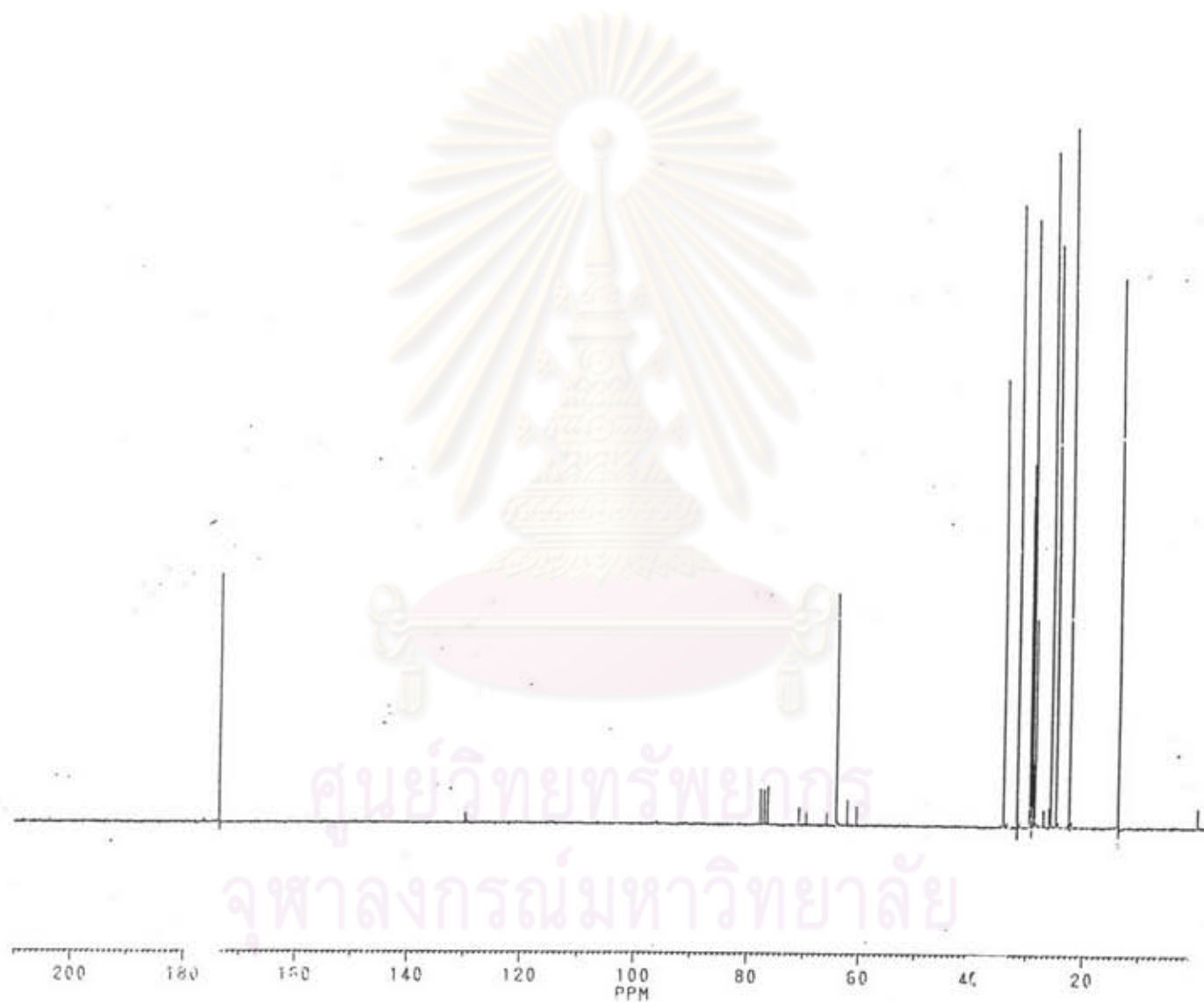


Figure A8 : ^{13}C -NMR(CDCl_3) spectrum of incompletely esterified 1-octanol monoester

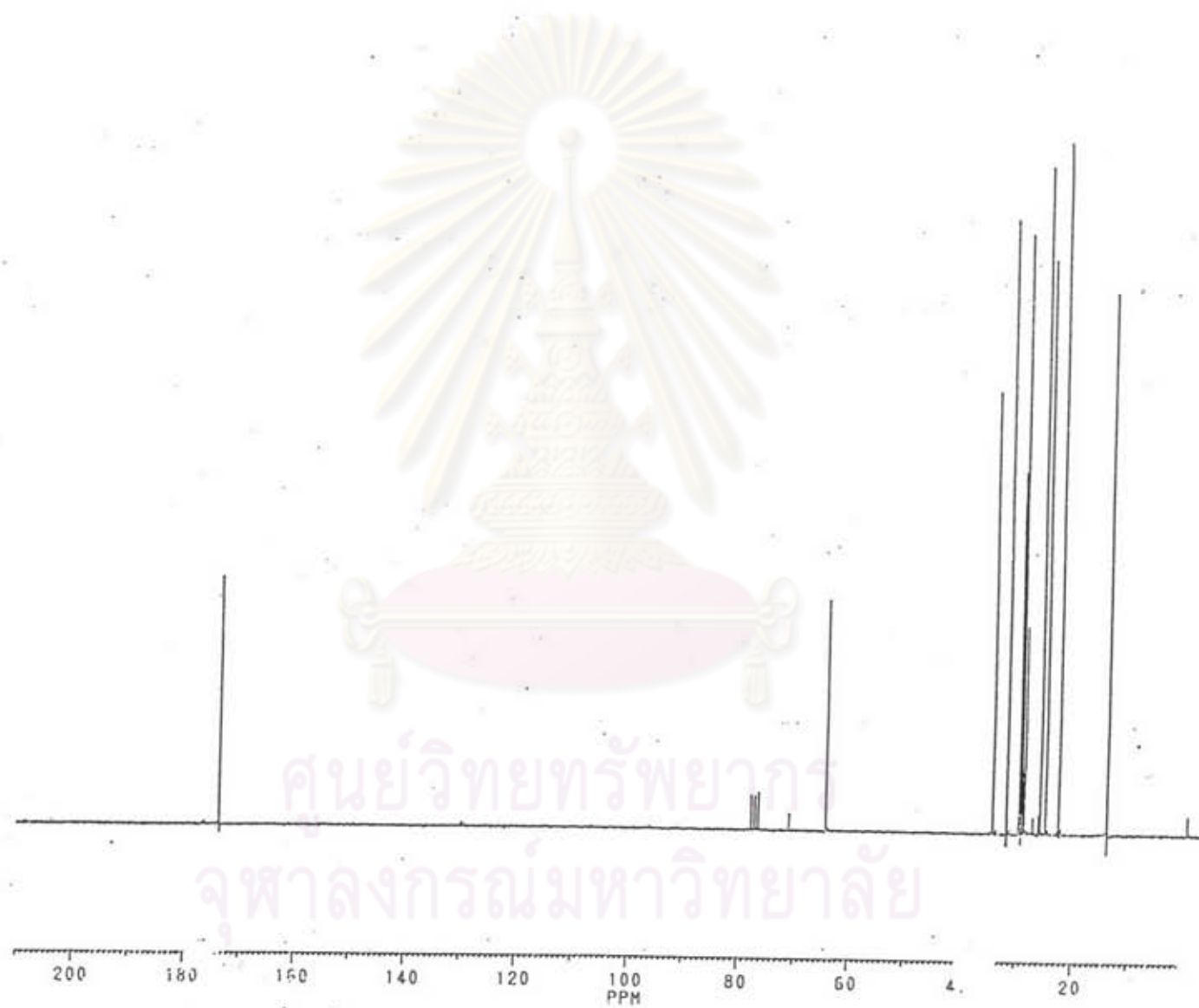


Figure A9 : ^{13}C -NMR(CDCl_3) spectrum of completed 1-octanol monoester

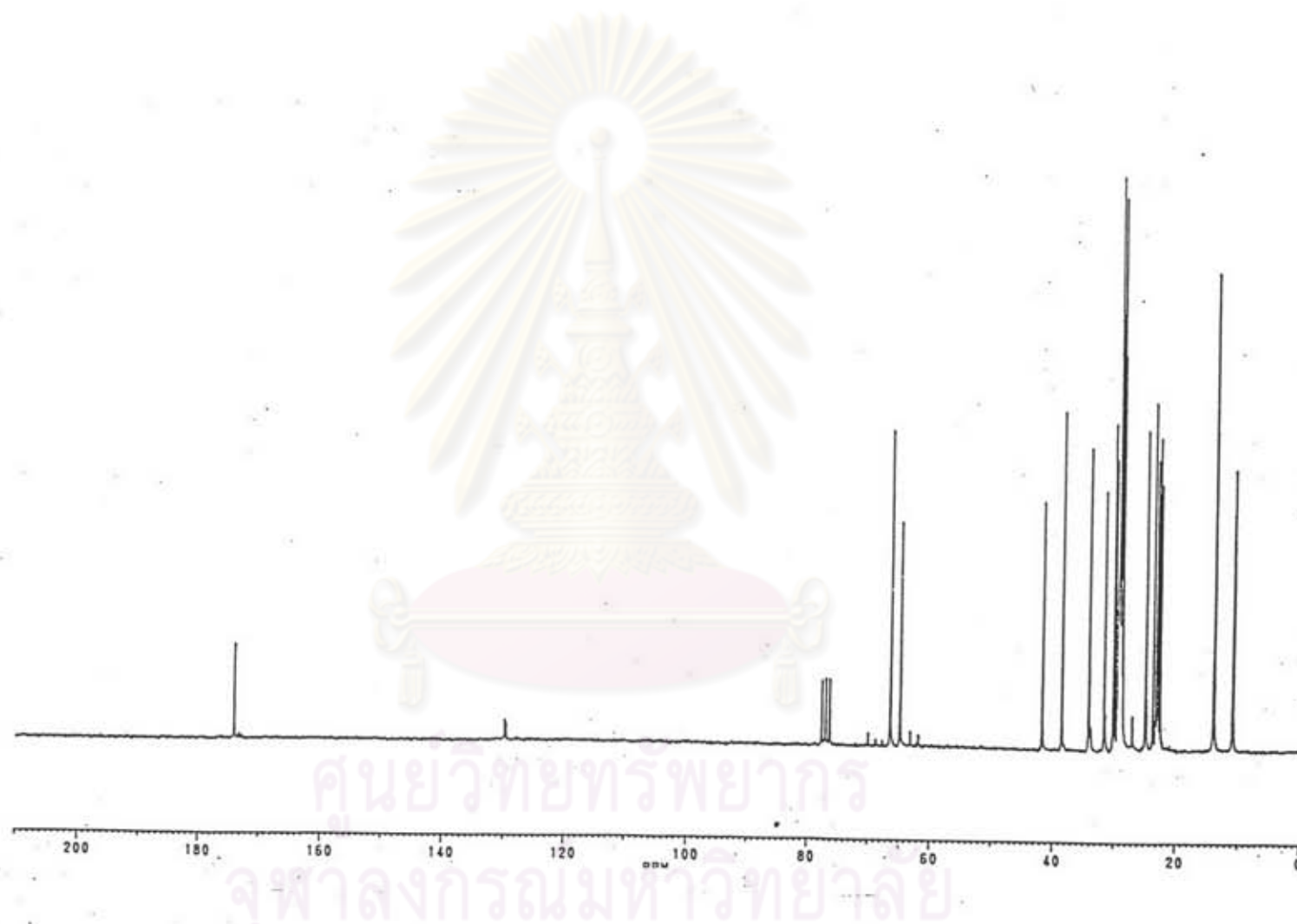


Figure A10 : $^{13}\text{C-NMR}$ (CDCl_3) spectrum of incompletely 2-ethyl-1-hexanol monoester

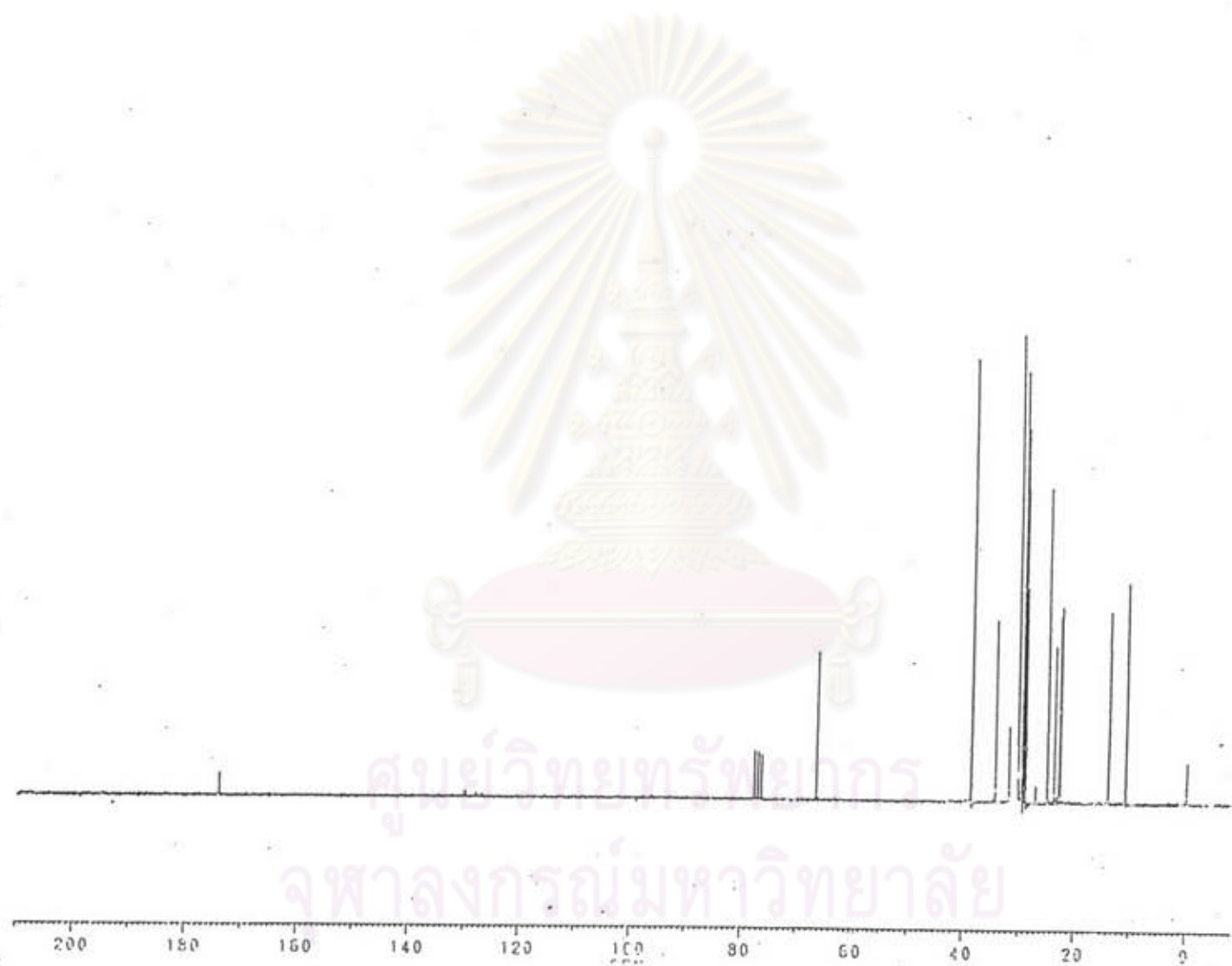


Figure A11 : ^{13}C -NMR(CDCl_3) spectrum of completed 2-ethyl-1-hexanol monoester

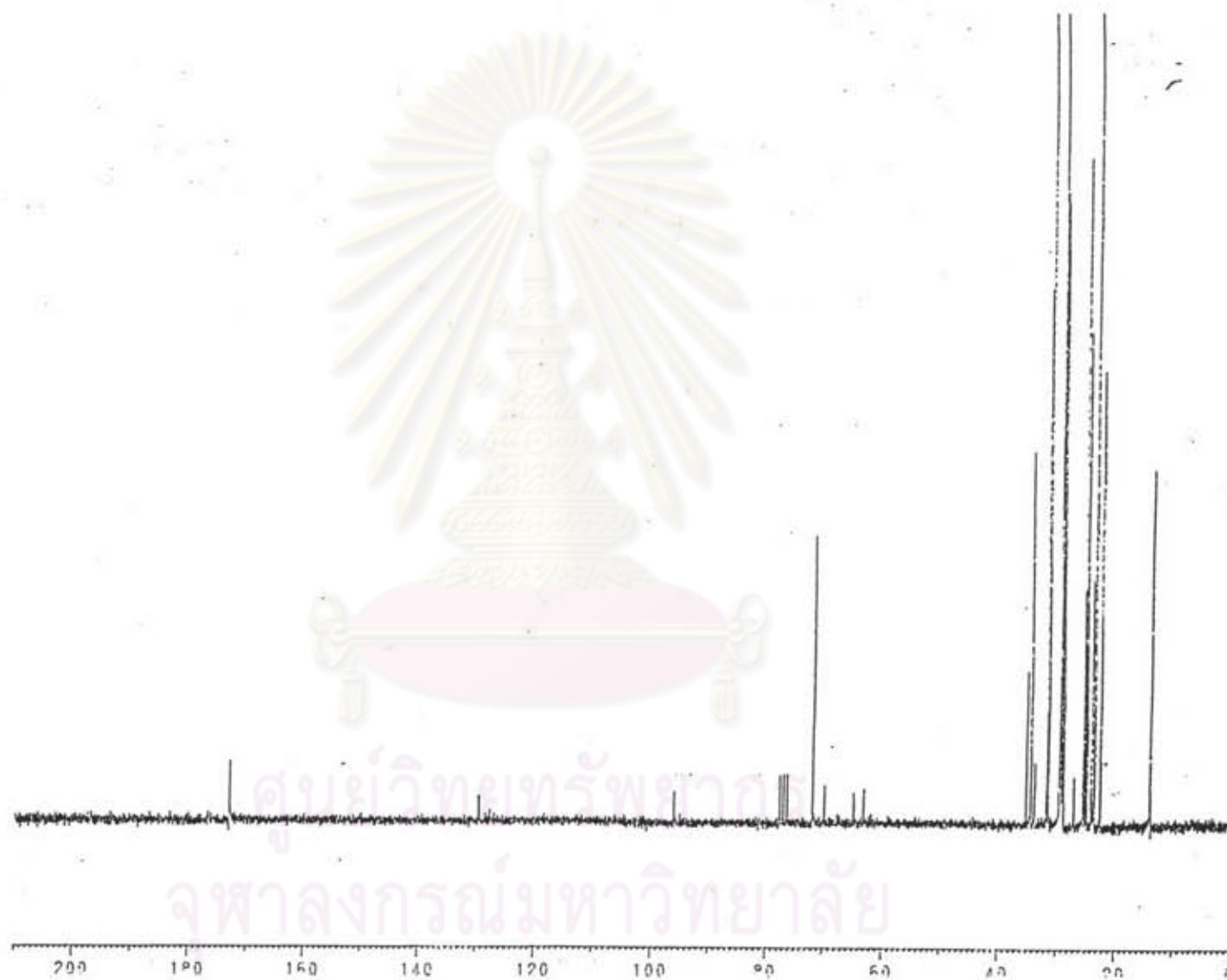


Figure A12 : ^{13}C -NMR(CDCl_3) spectrum of incompletely esterified cyclohexanol monoester

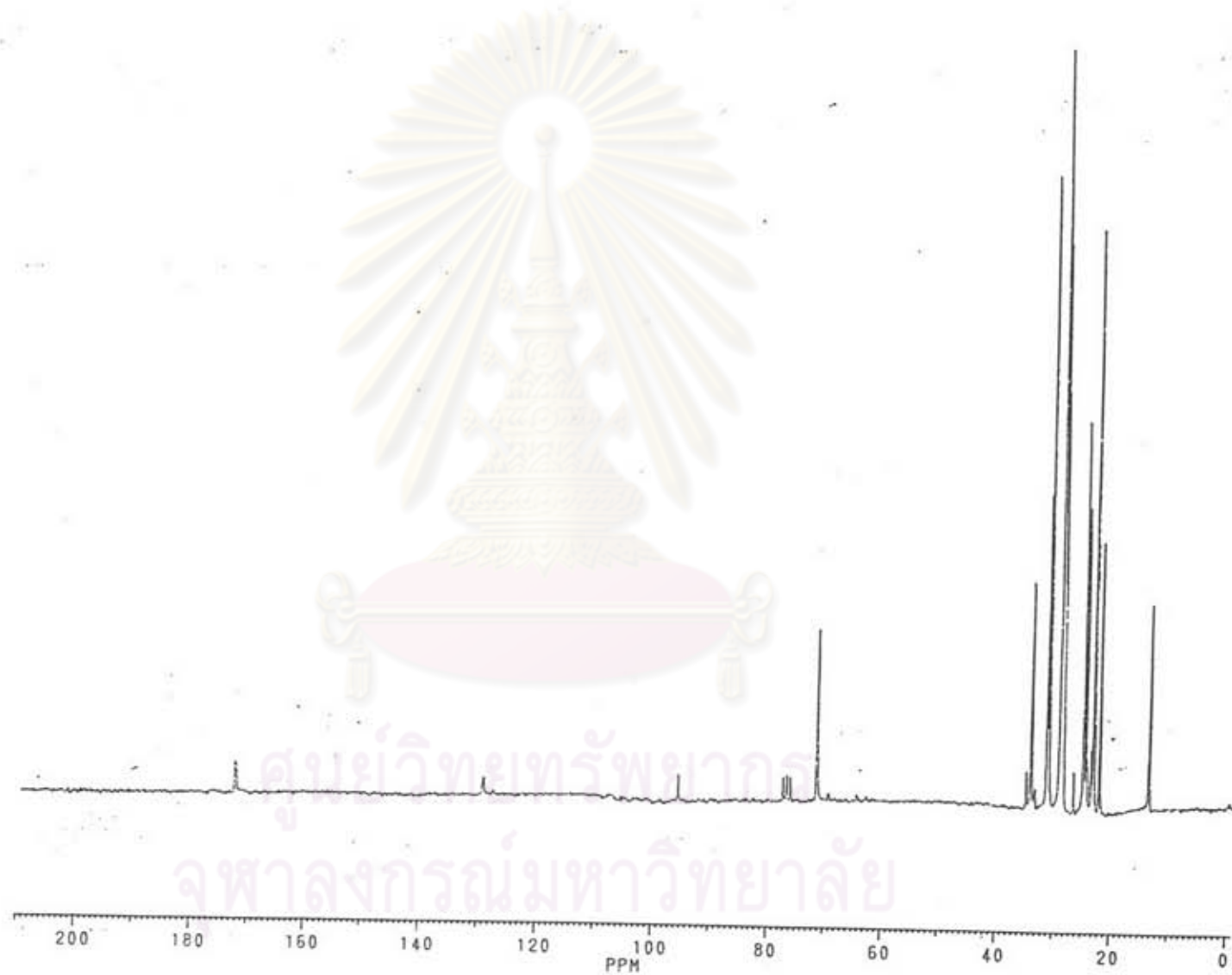


Figure A13 : ^{13}C -NMR(CDCl_3) spectrum of completed cyclohexanol monoester

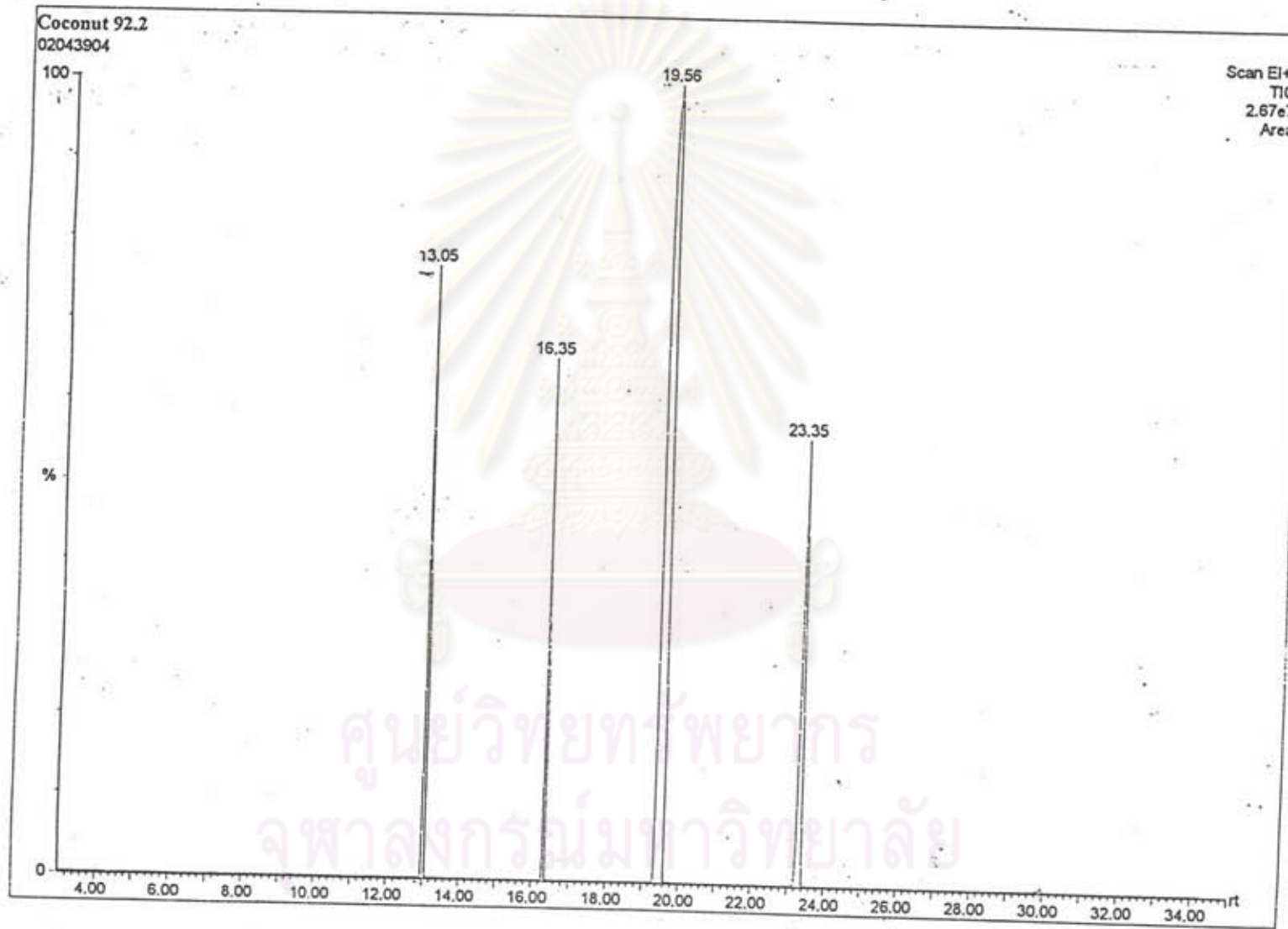


Figure A14 : GC chromatogram of hydrogenated hexyl monoester

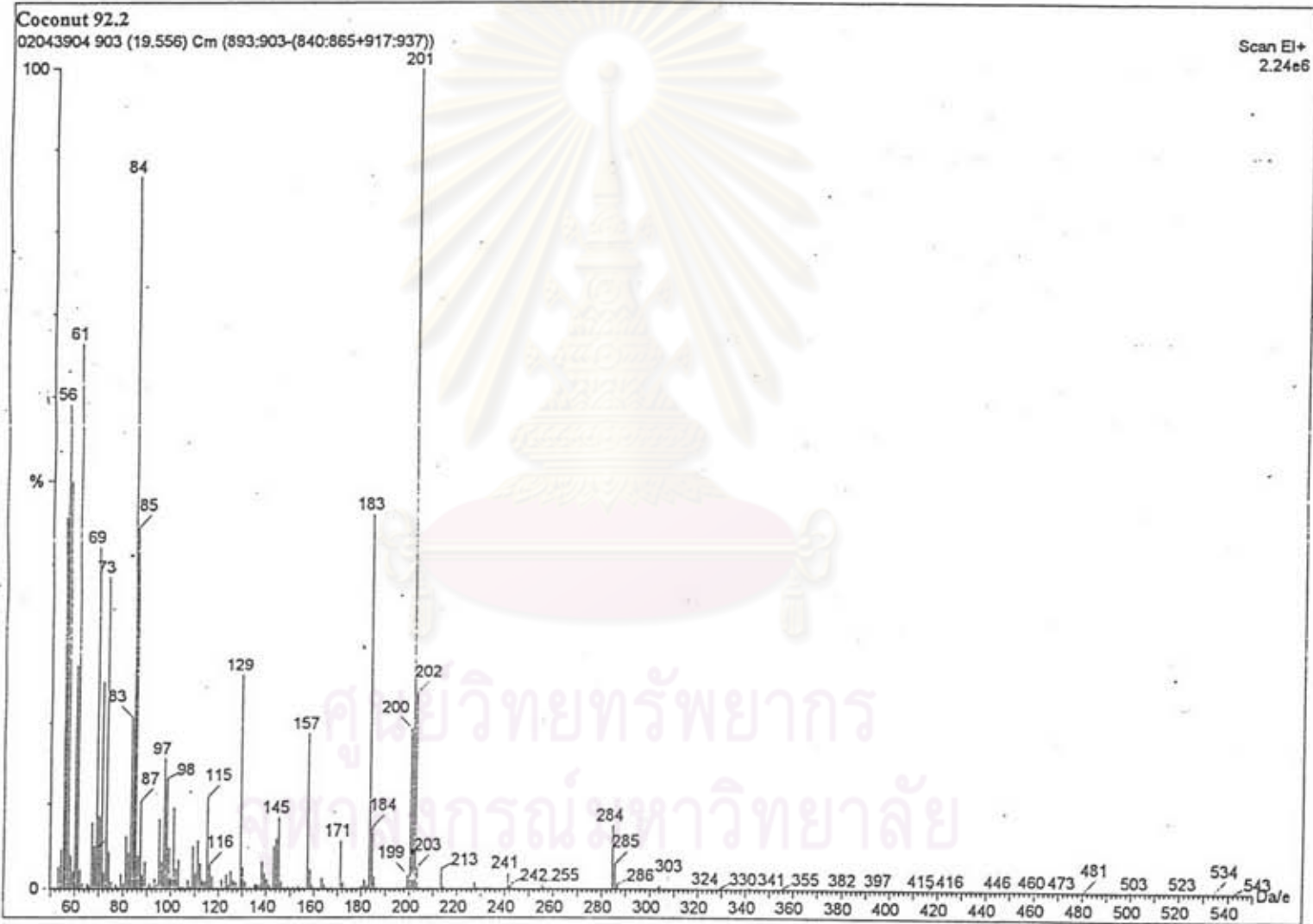


Figure A15 : Mass spectrum of hexyl laurate

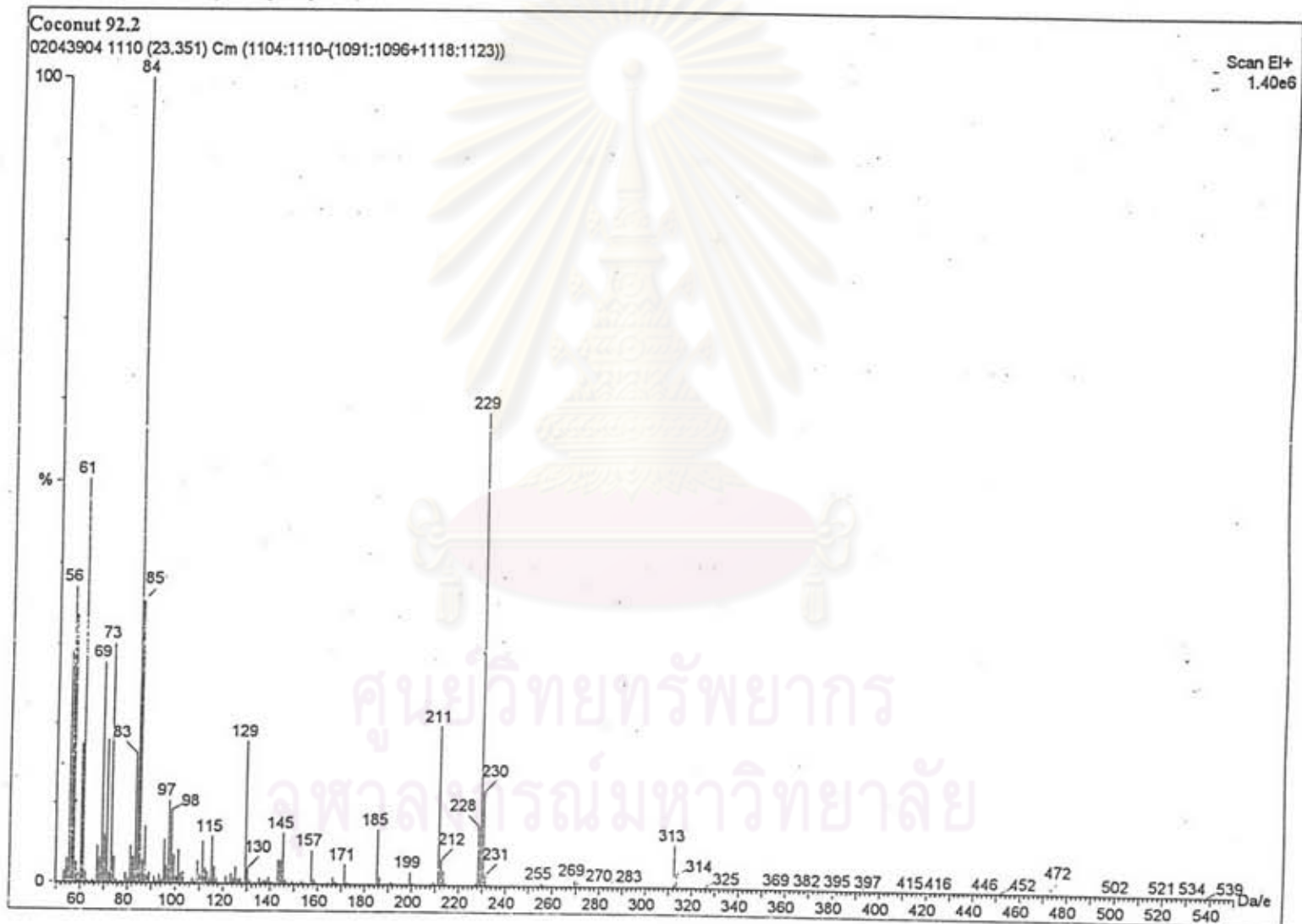


Figure A16 : Mass spectrum of hexyl myristate

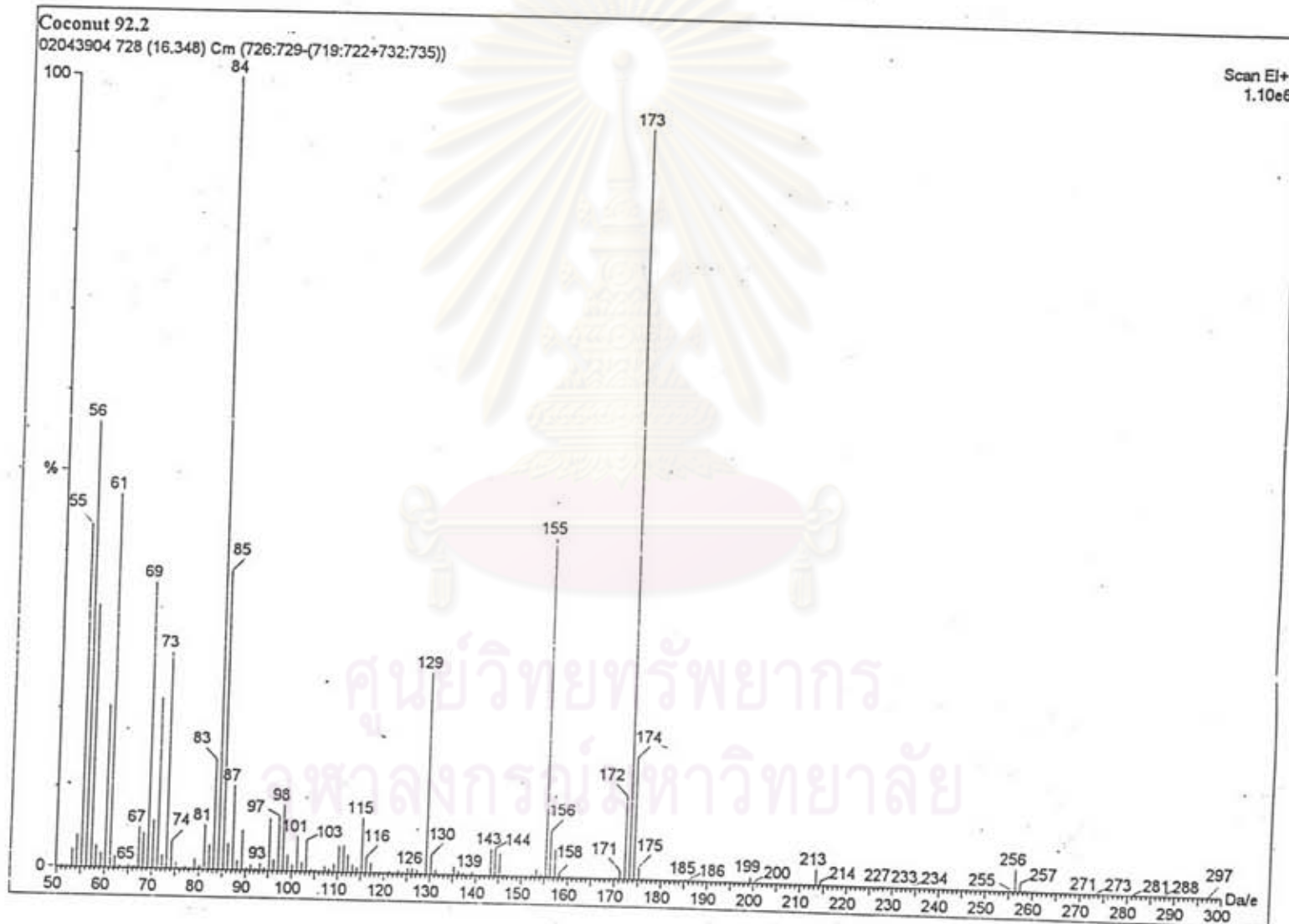


Figure A17 : Mass spectrum of hexyl caprate

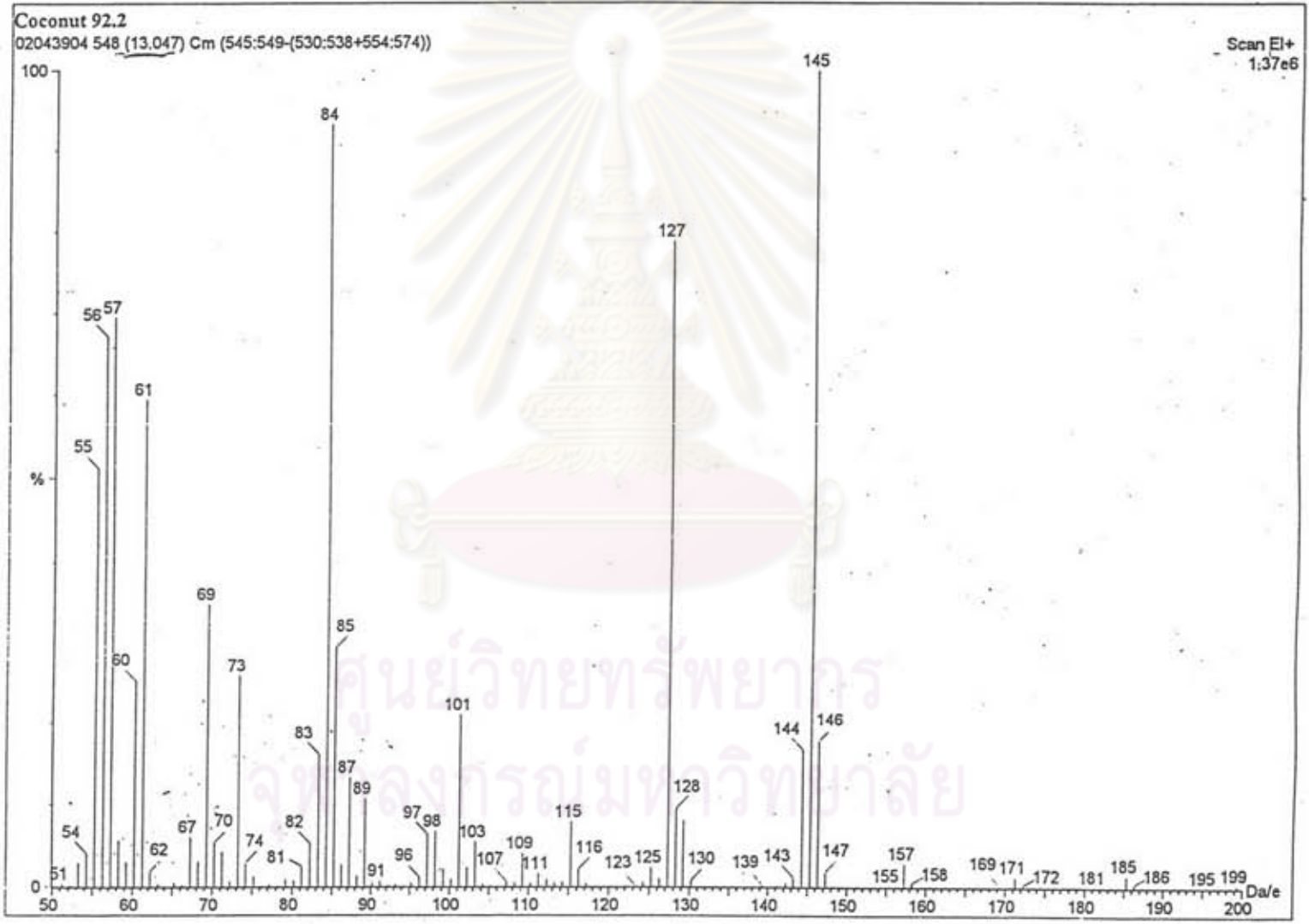


Figure A18 : Mass spectrum of hexyl caprilate

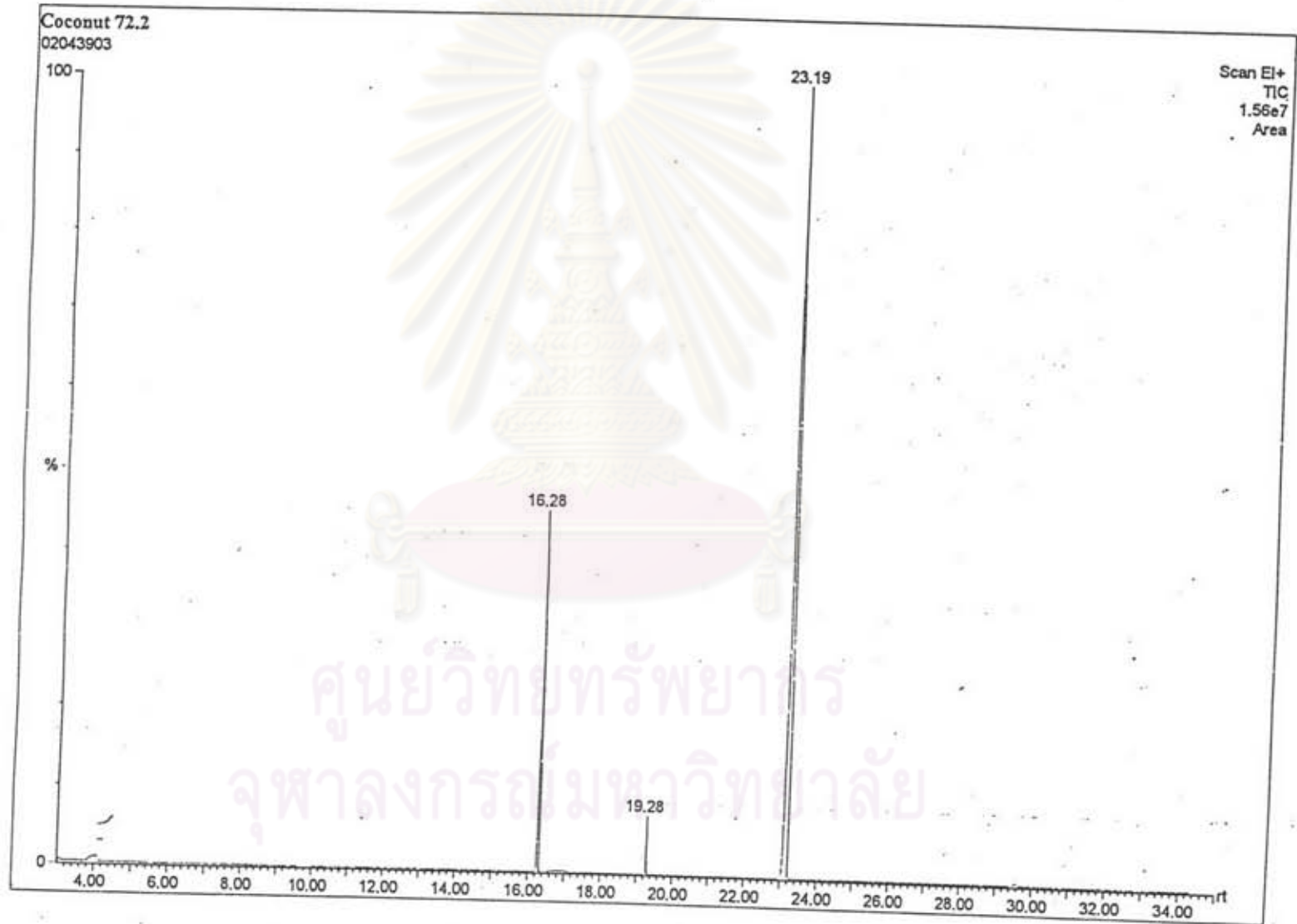


Figure A19 : GC chromatogram of hydrogenated 1-octyl monoester

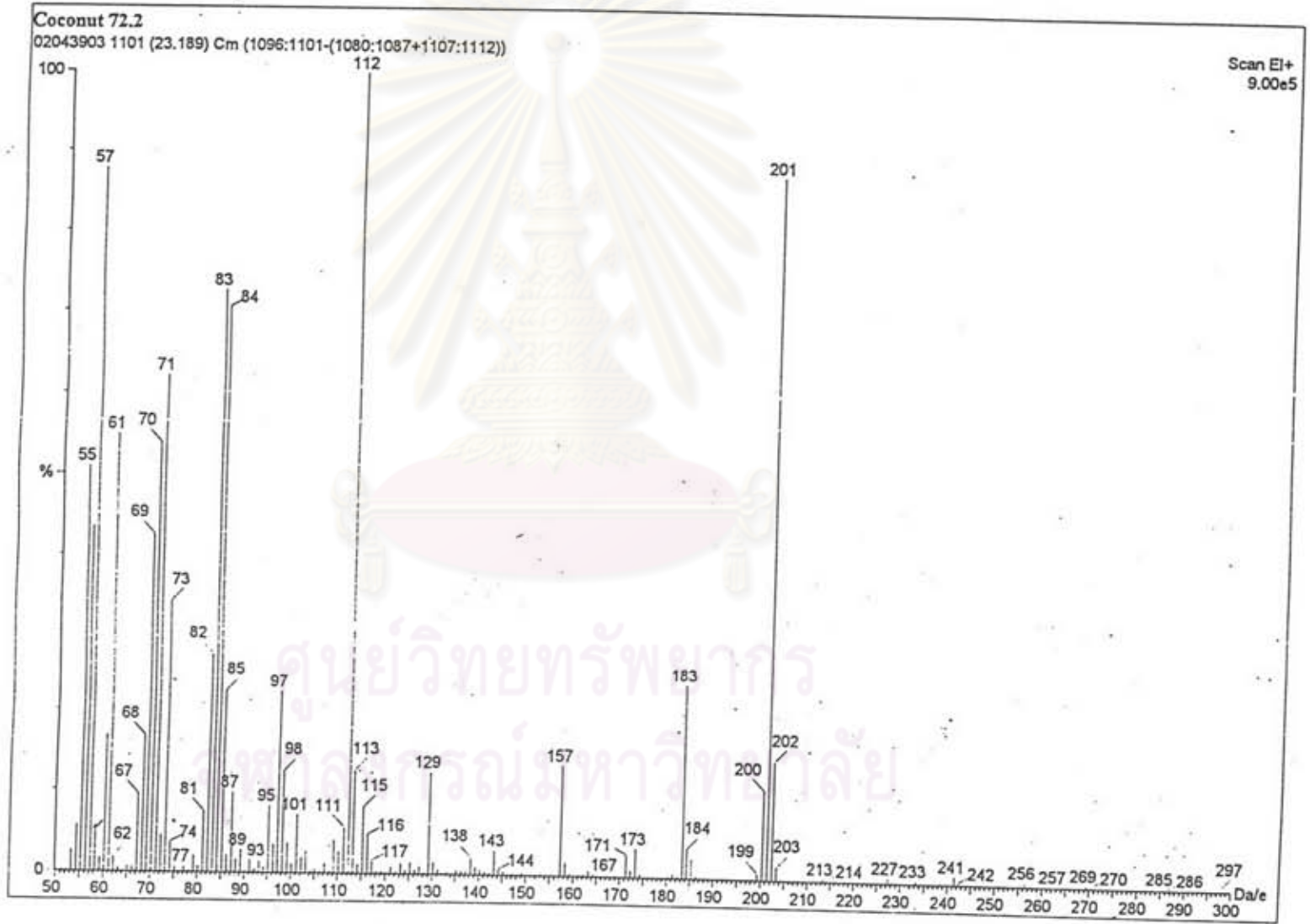


Figure A20 : Mass spectrum of 1-octyl laurate

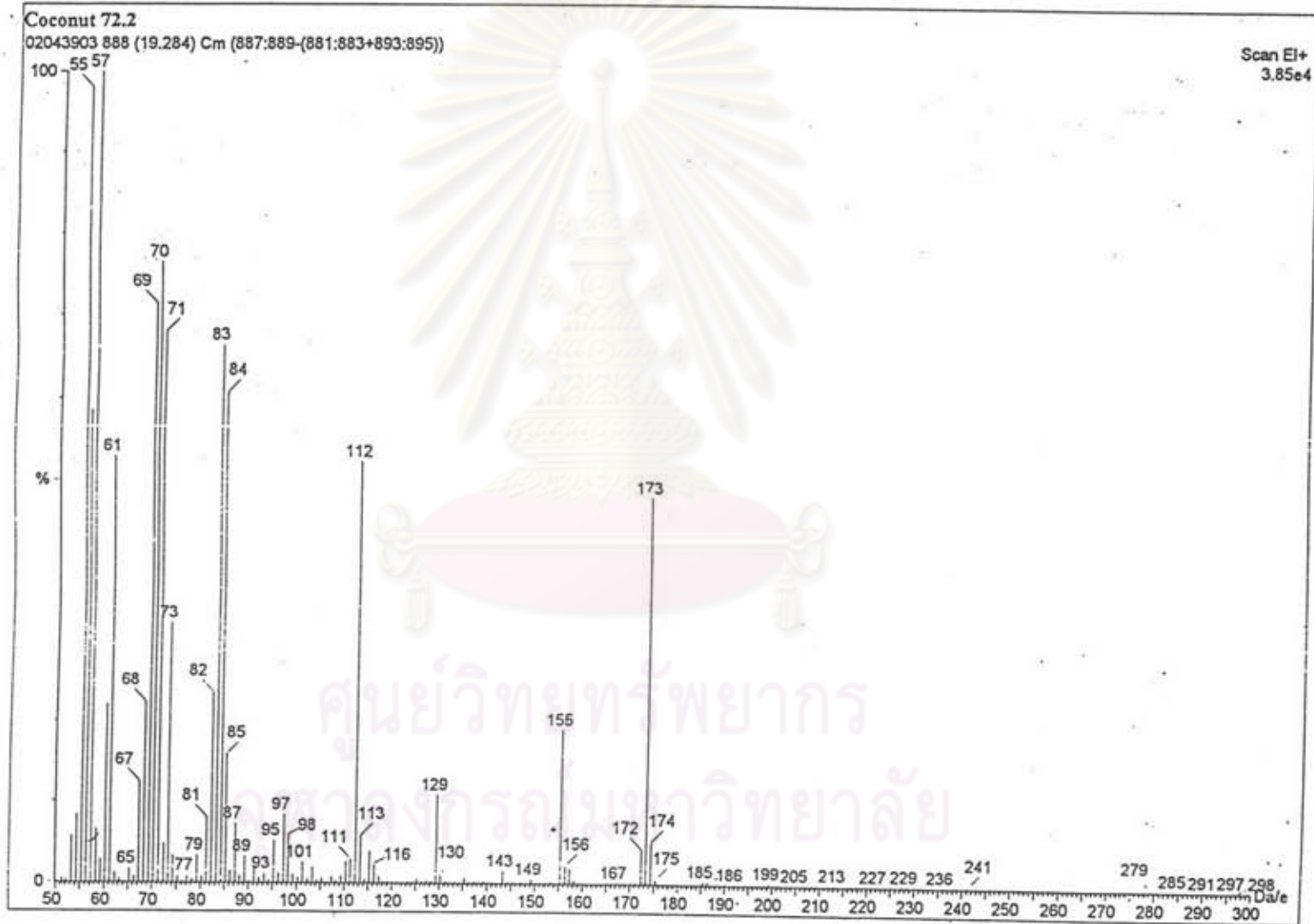


Figure A21 : Mass spectrum of 1-octyl caprate

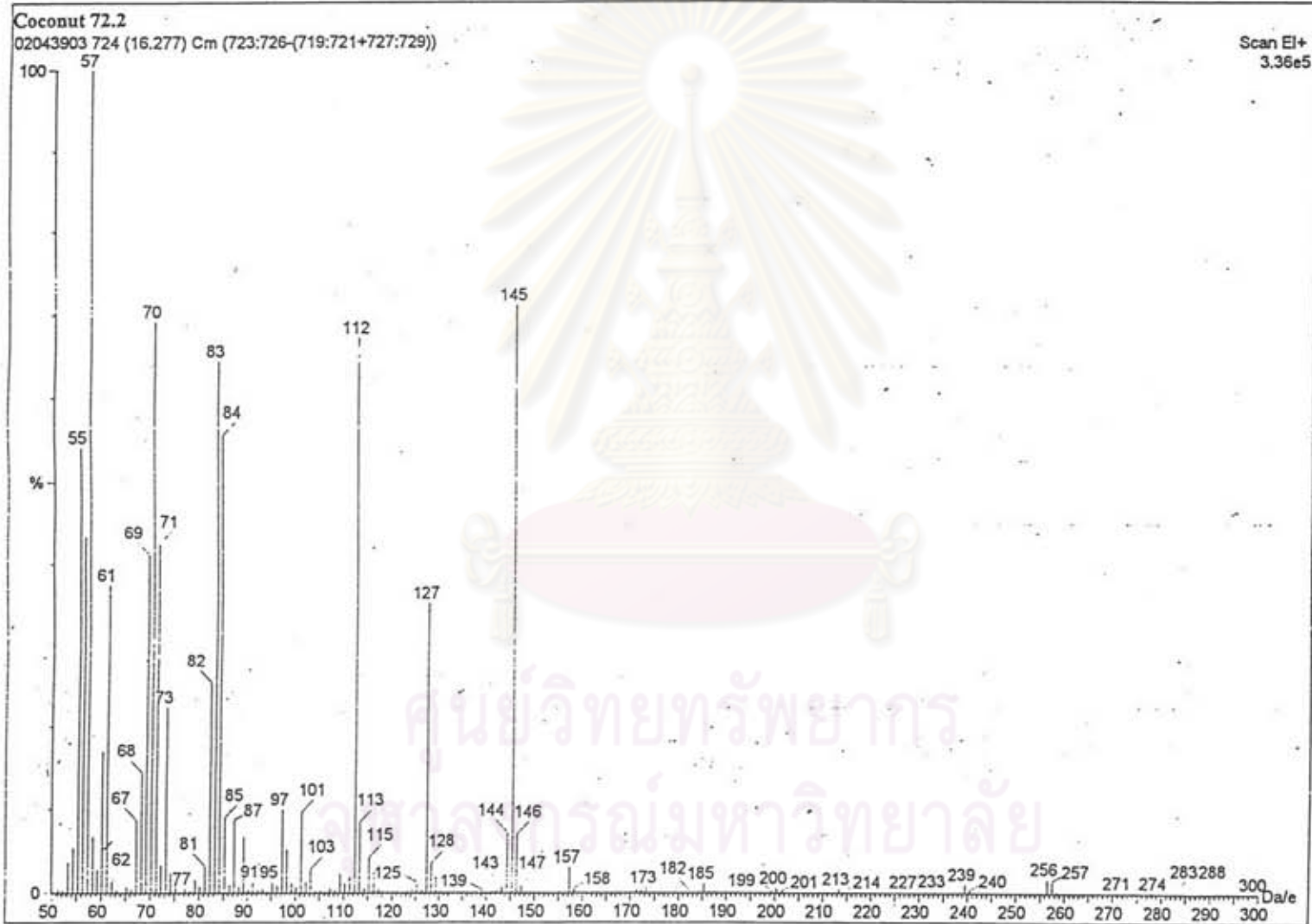


Figure A22 : Mass spectrum of 1-octyl capilate

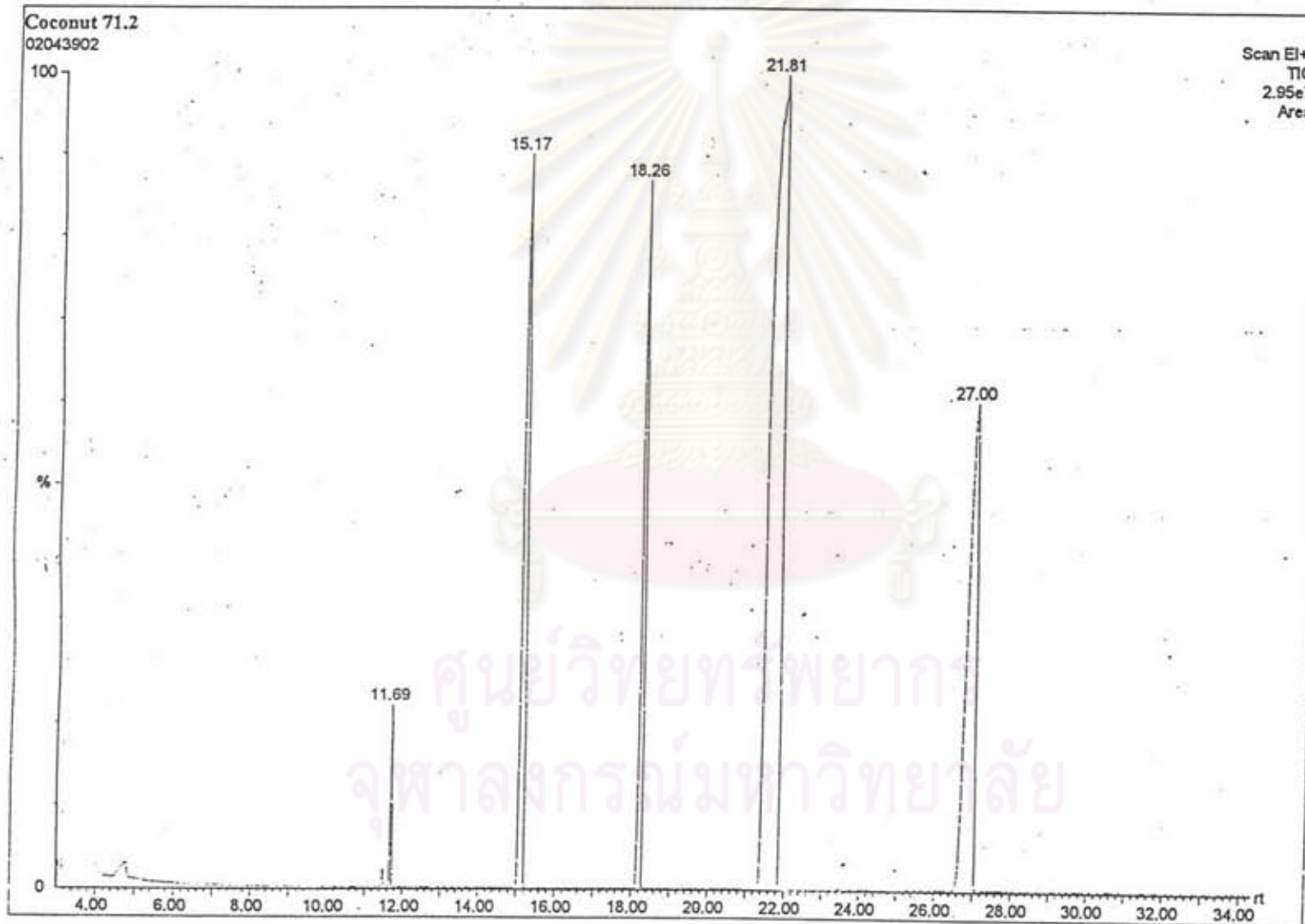


Figure A23 : GC chromatogram of hydrogenated 2-ethylhexyl monoester

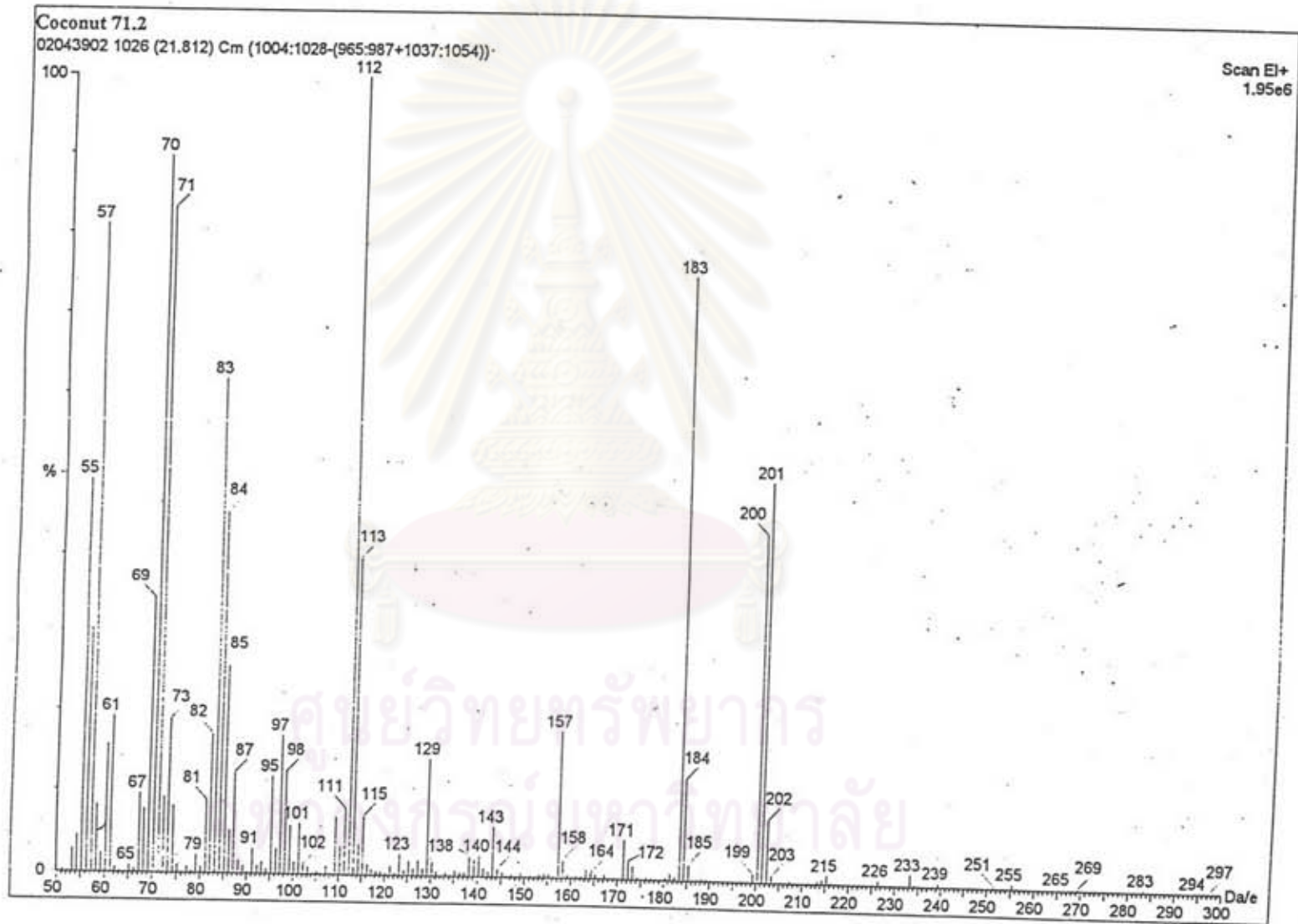


Figure A24 : Mass spectrum of 2-ethylhexyl laurate

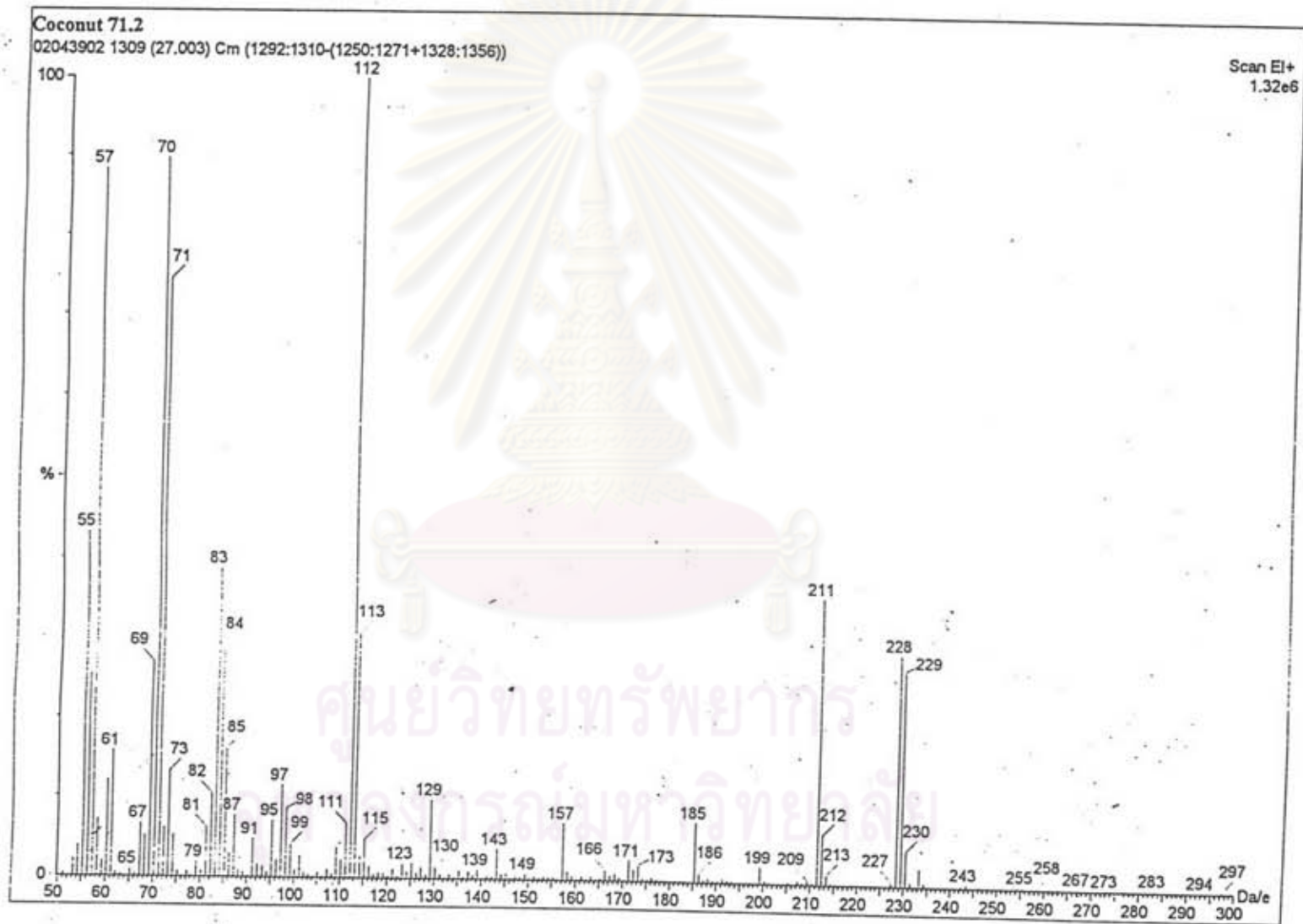


Figure A25 : Mass spectrum of 2-ethylhexyl myristate

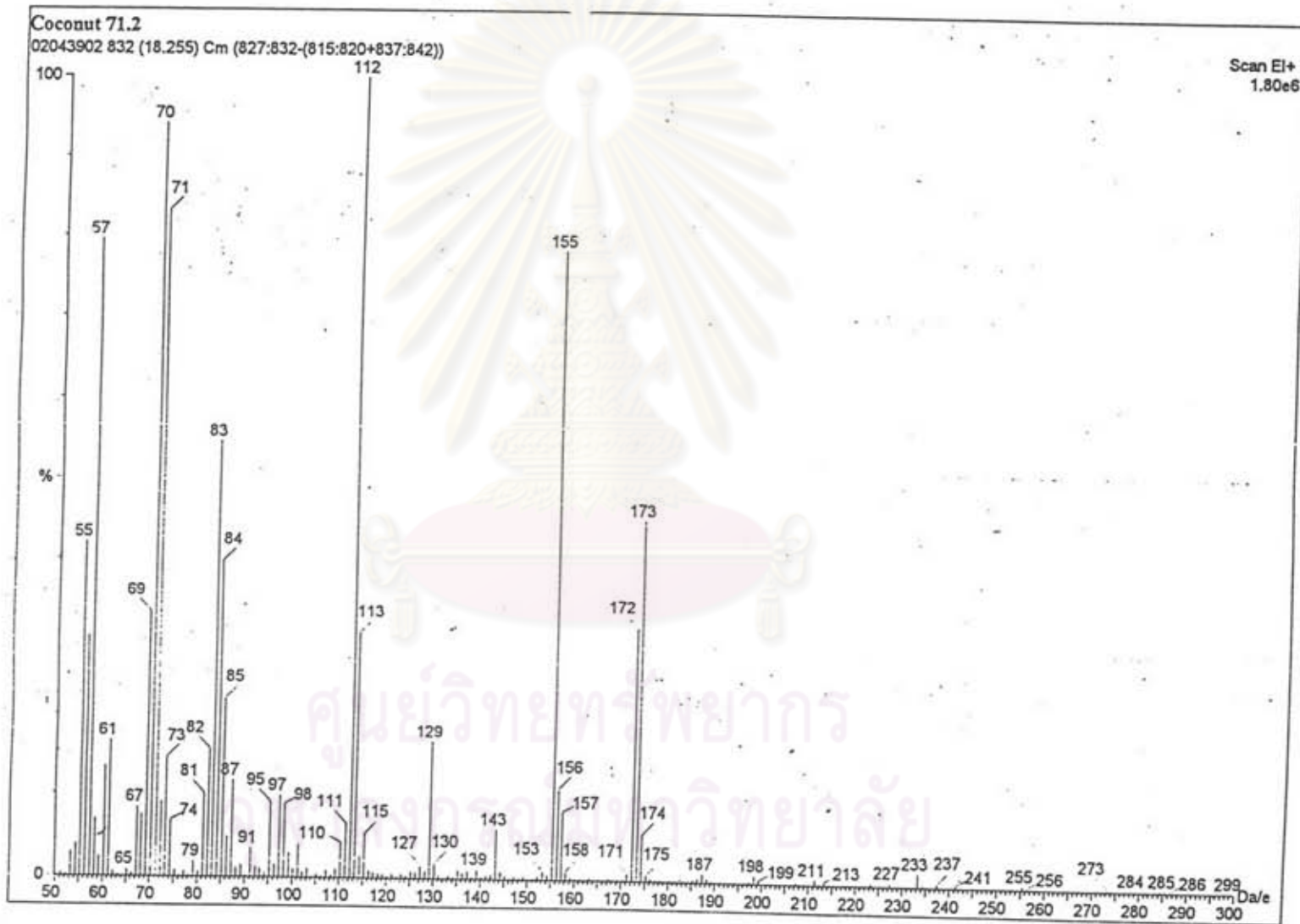


Figure A26 : Mass spectrum of 2-ethylhexyl caprate

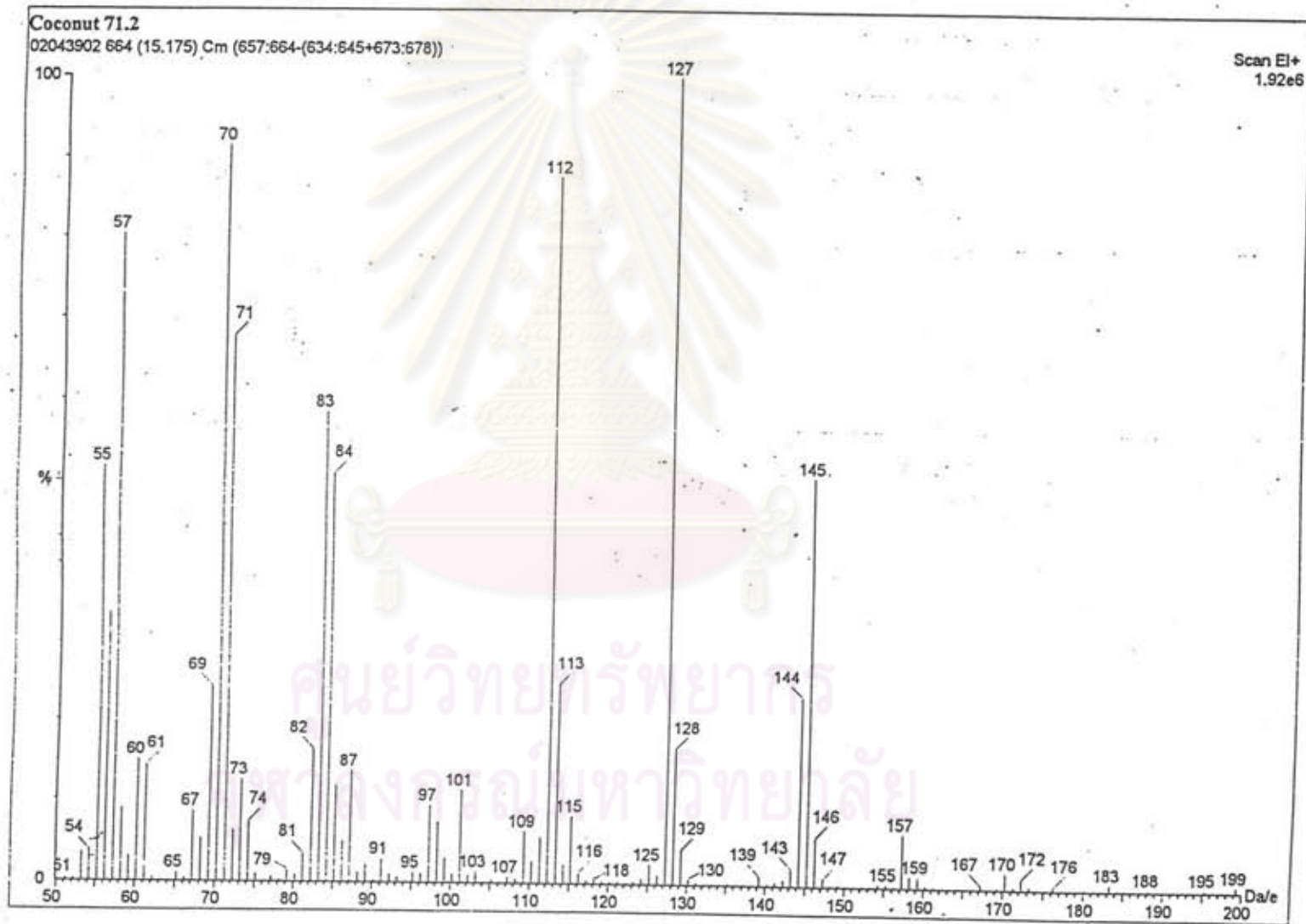


Figure A27 : Mass spectrum of 2-ethylhexyl capilate

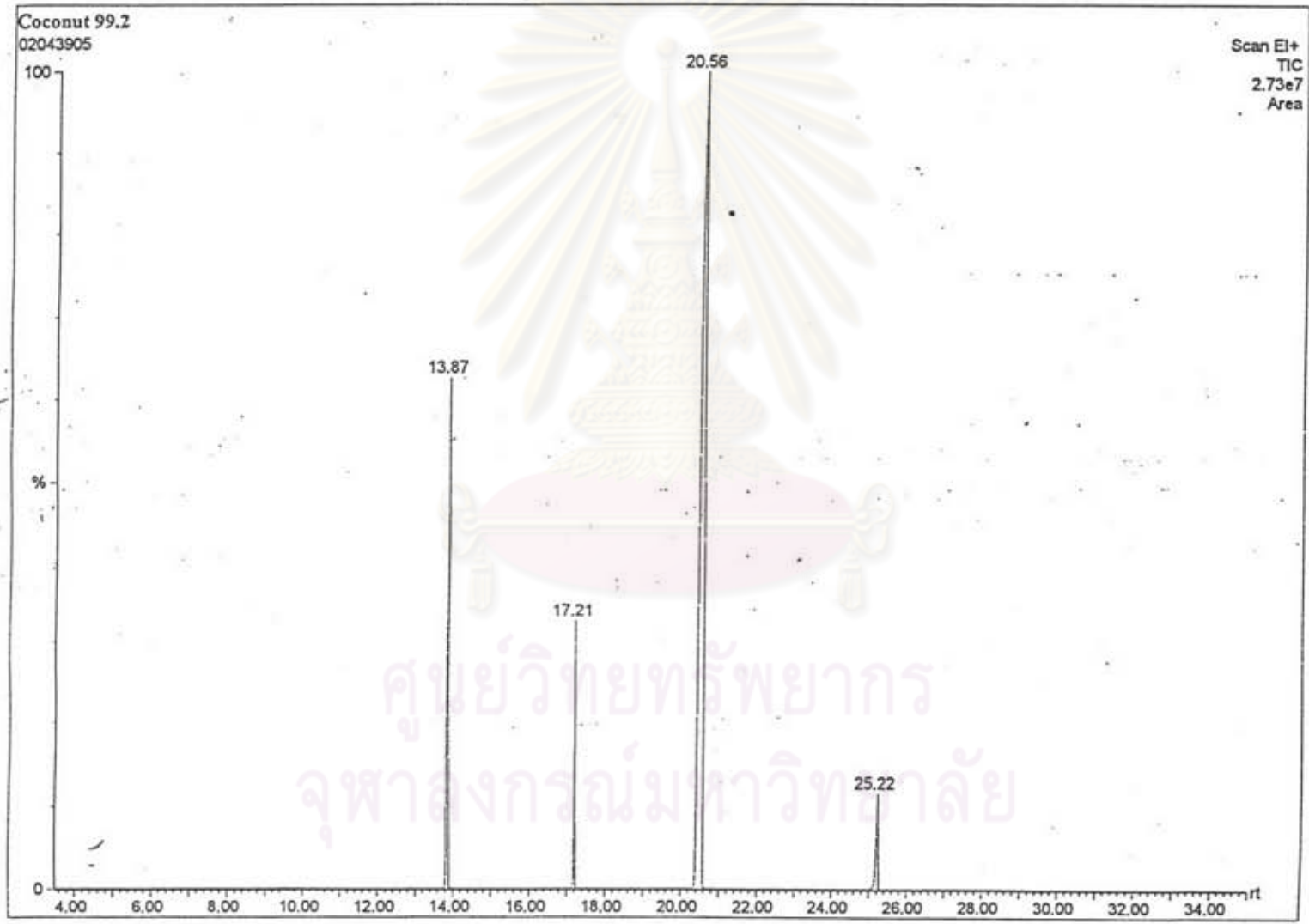


Figure A28 : GC chromatogram of hydrogenated cyclohexyl monoester

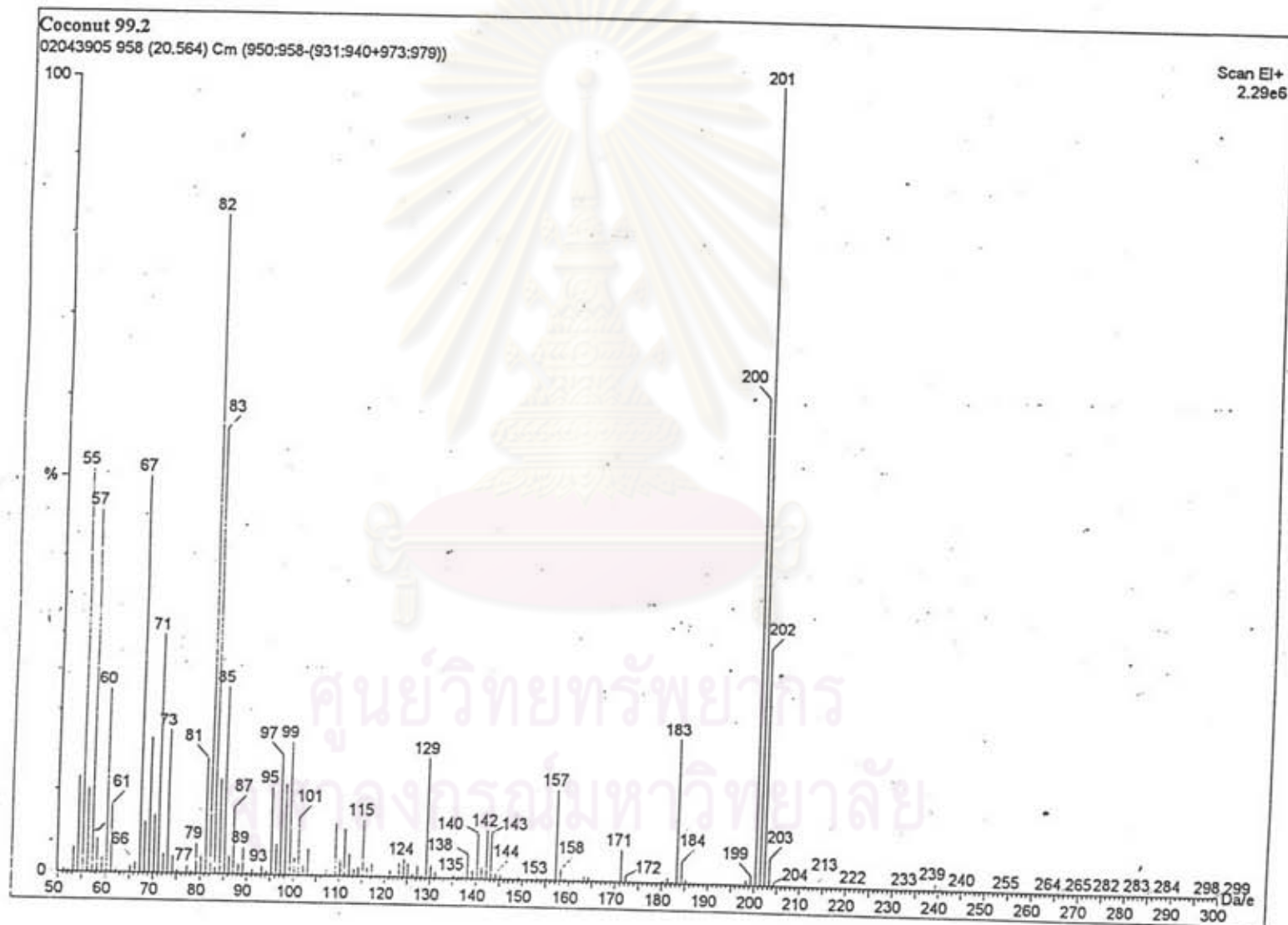


Figure A29 : Mass spectrum of cyclohexyl laurate

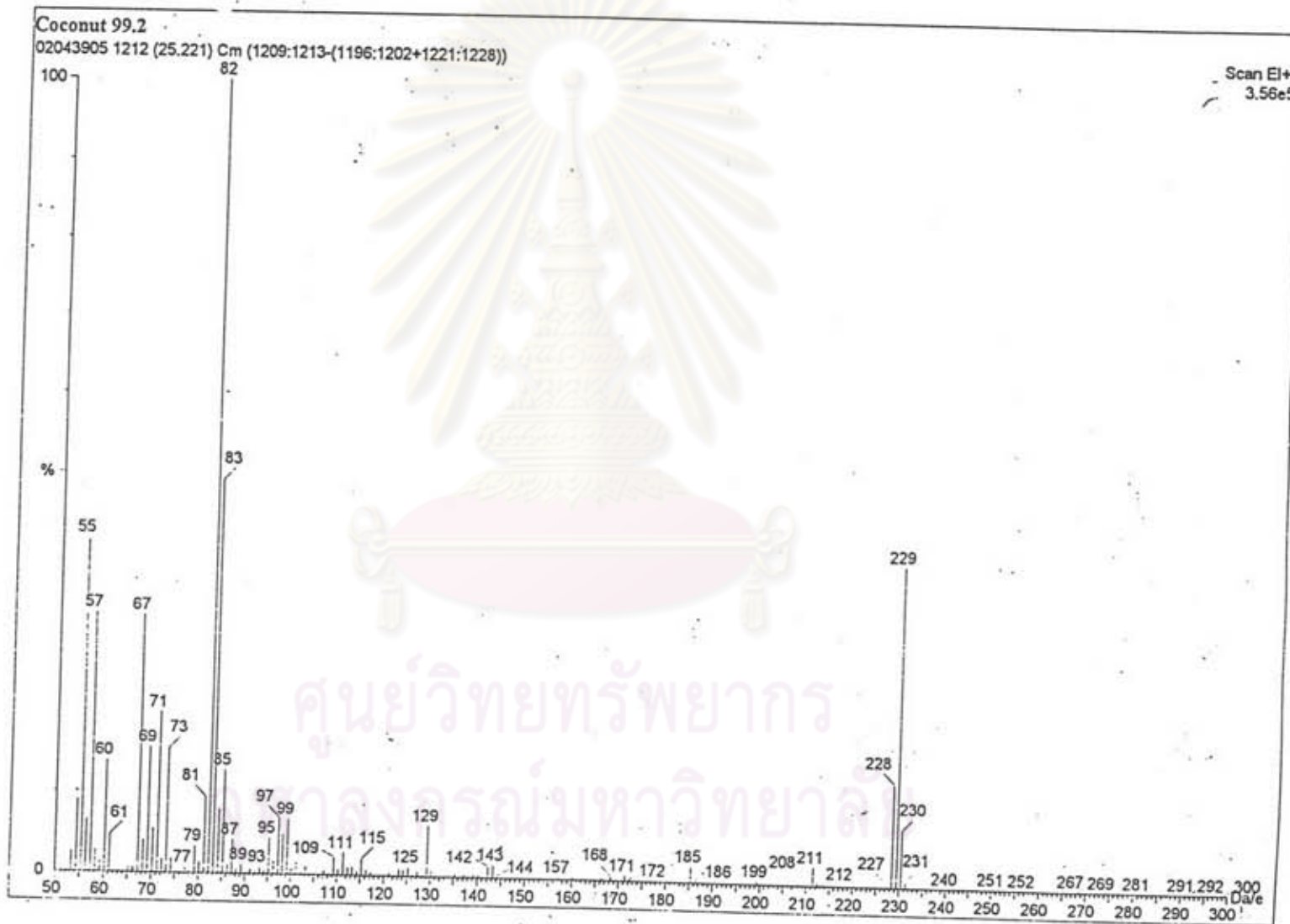


Figure A30 : Mass spectrum of cyclohexyl myristate

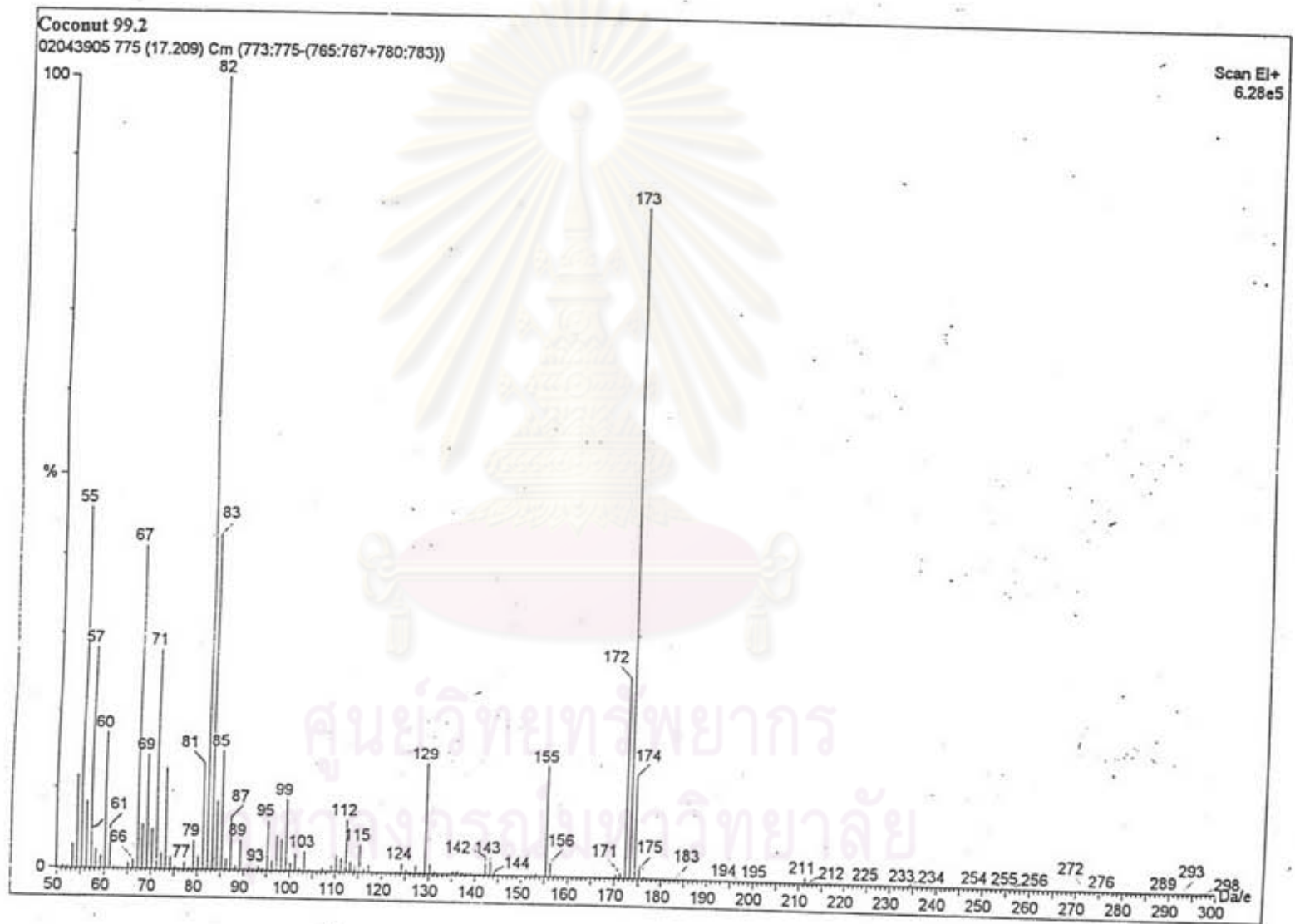


Figure A31 : Mass spectrum of cyclohexyl caprate

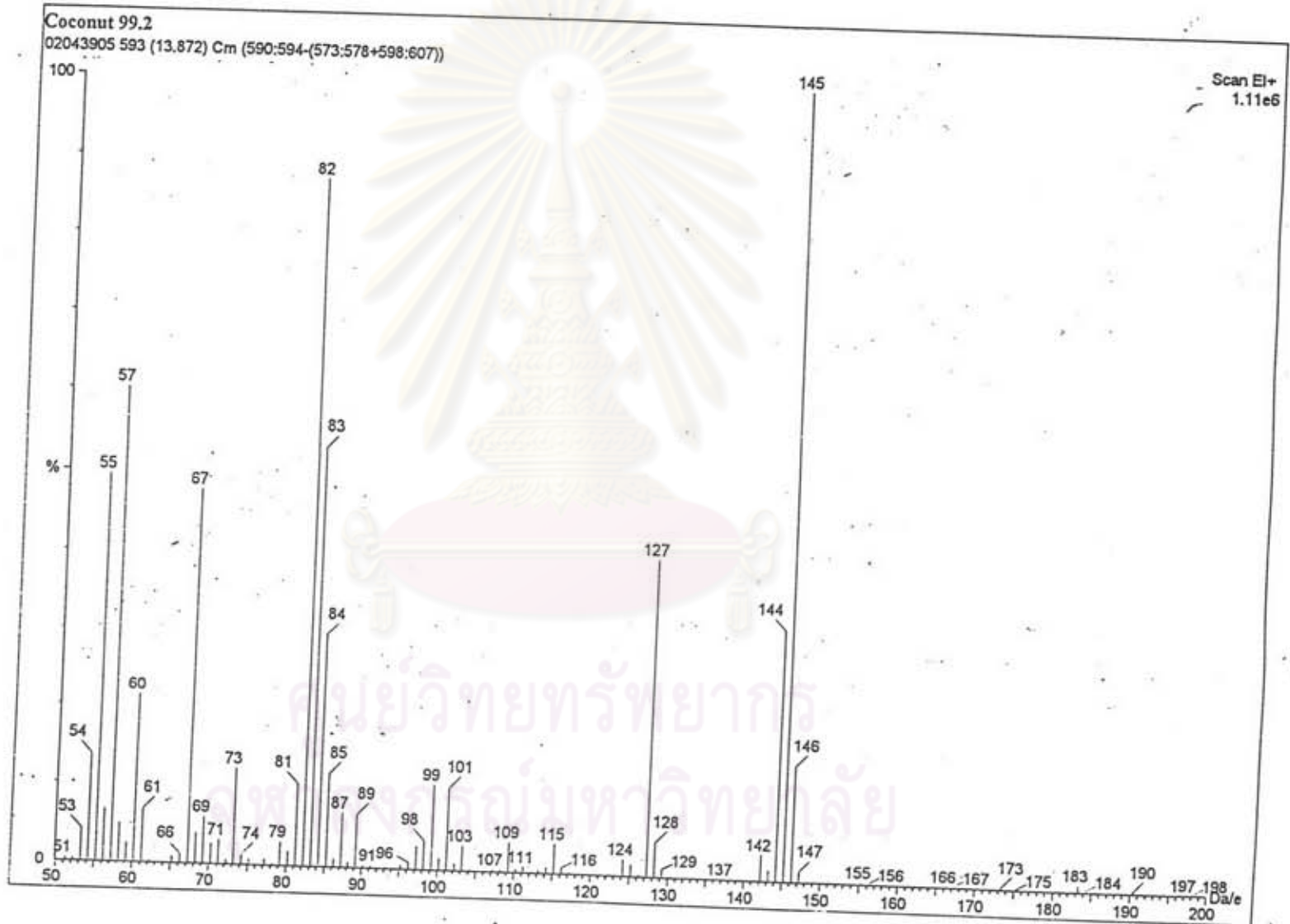


Figure A32 : Mass spectrum of cyclohexyl capilate

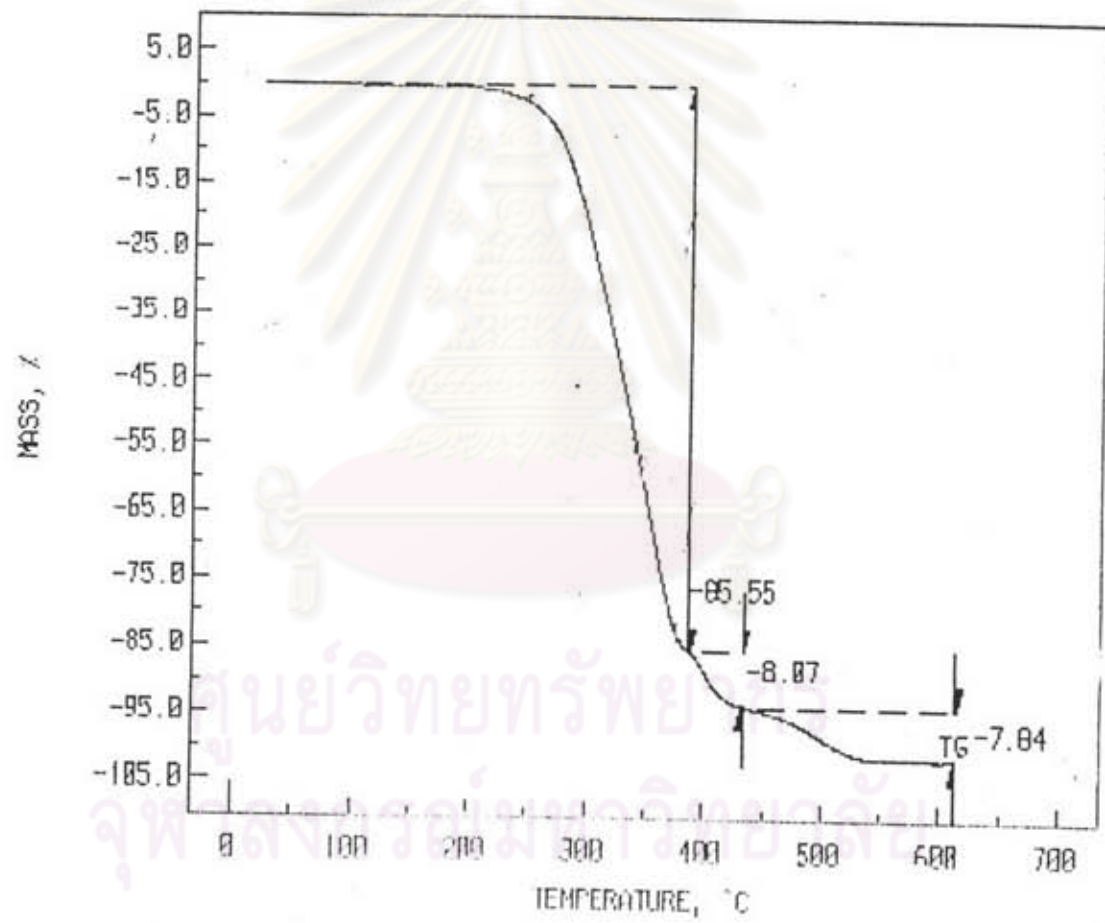


Figure A33 : Thermogram of coconut oil

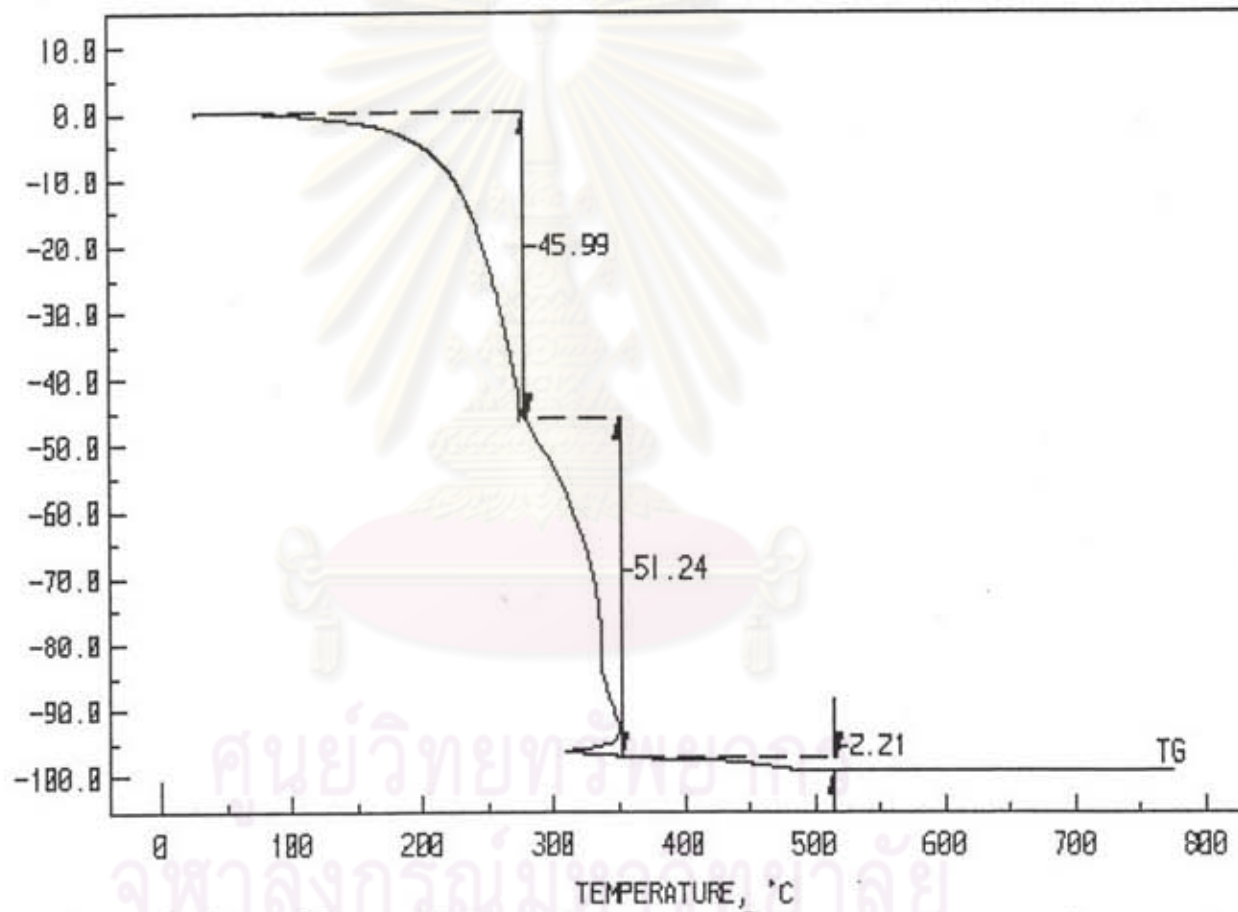


Figure A34 : Thermogram of hexyl monoester

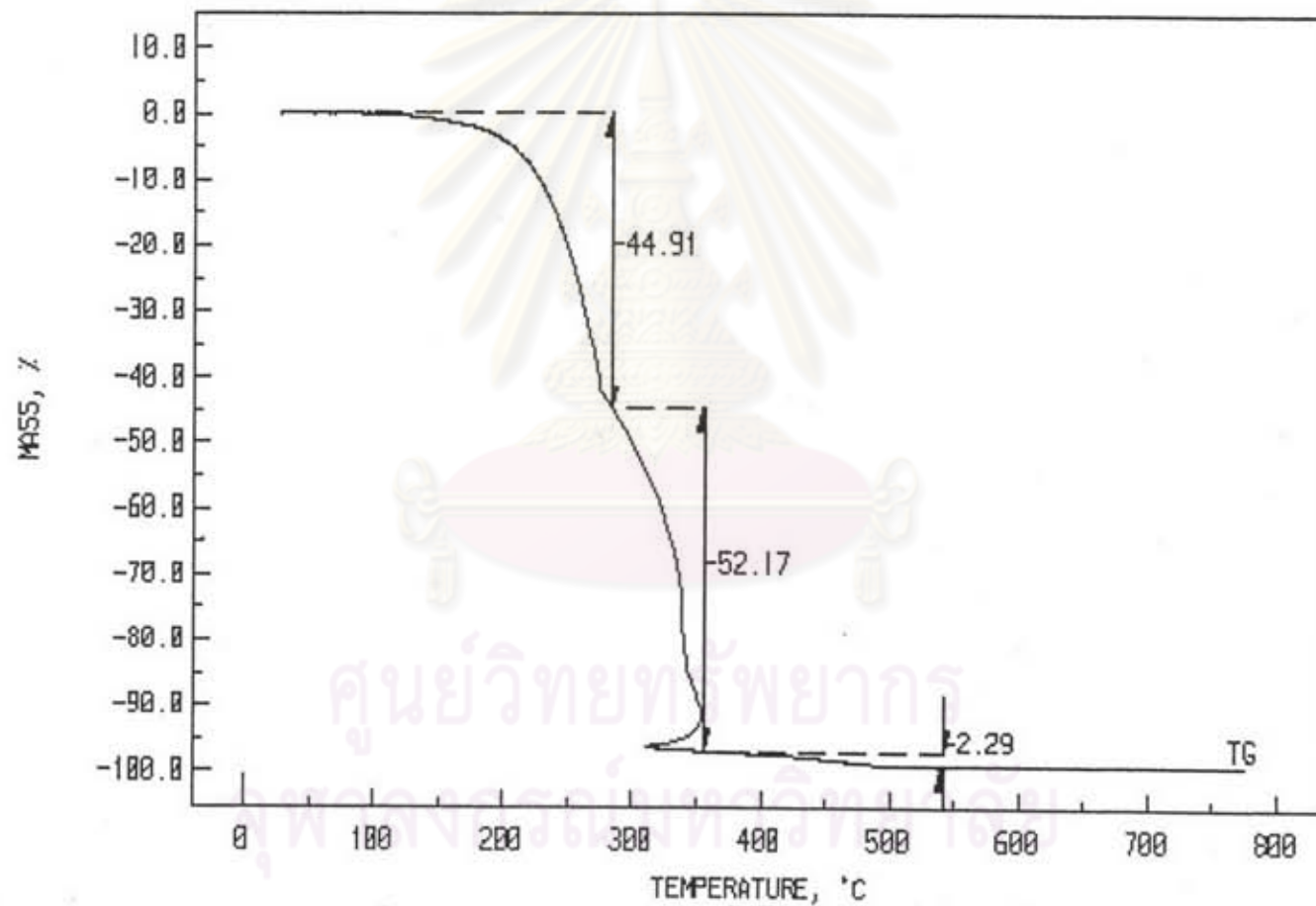


Figure A35 : Thermogram of hydrogenated hexyl monoester

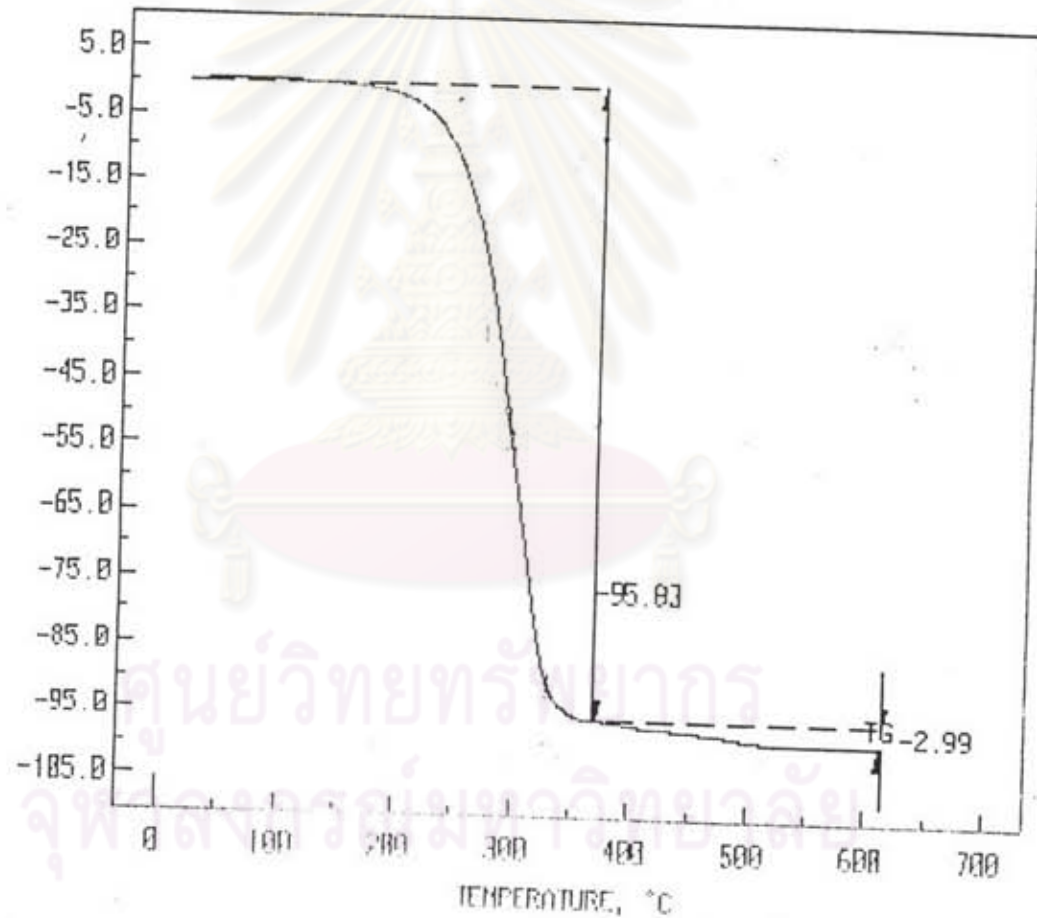


Figure A36 : Thermogram of 1- octyl monoester

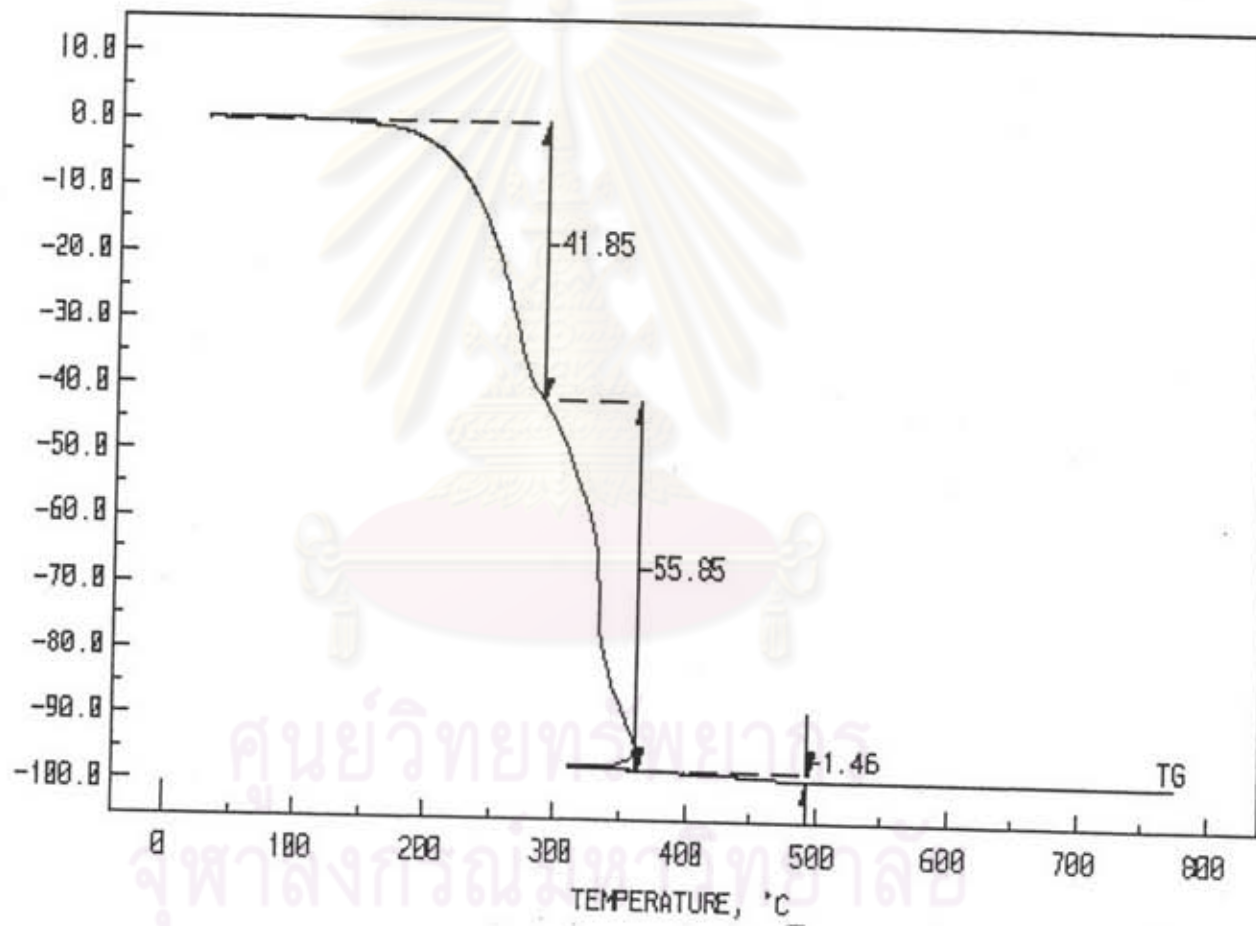


Figure A37 : Thermogram of hydrogenated 1-octyl monoester

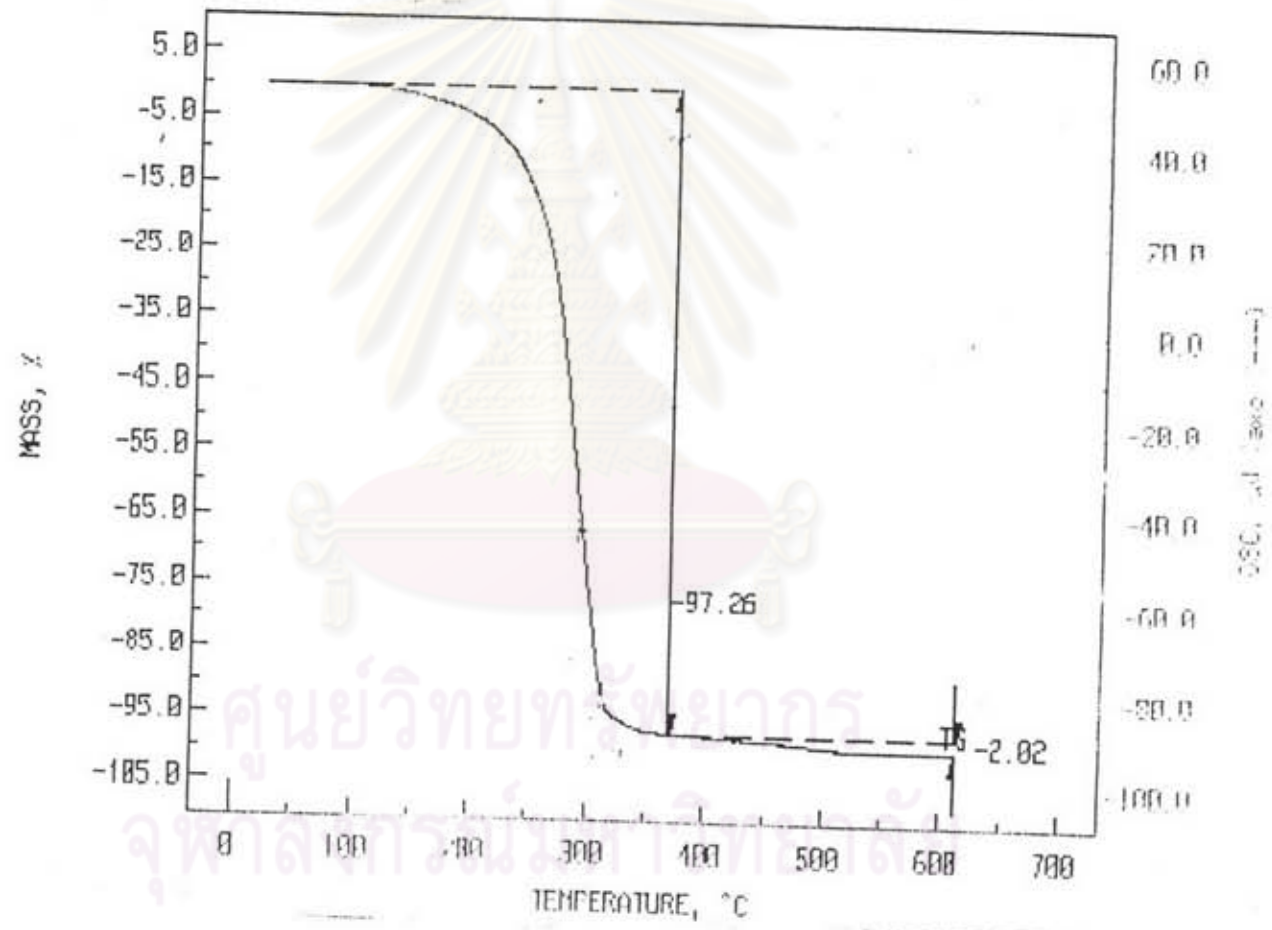


Figure A38 : Thermogram of 2-ethylhexyl monoester

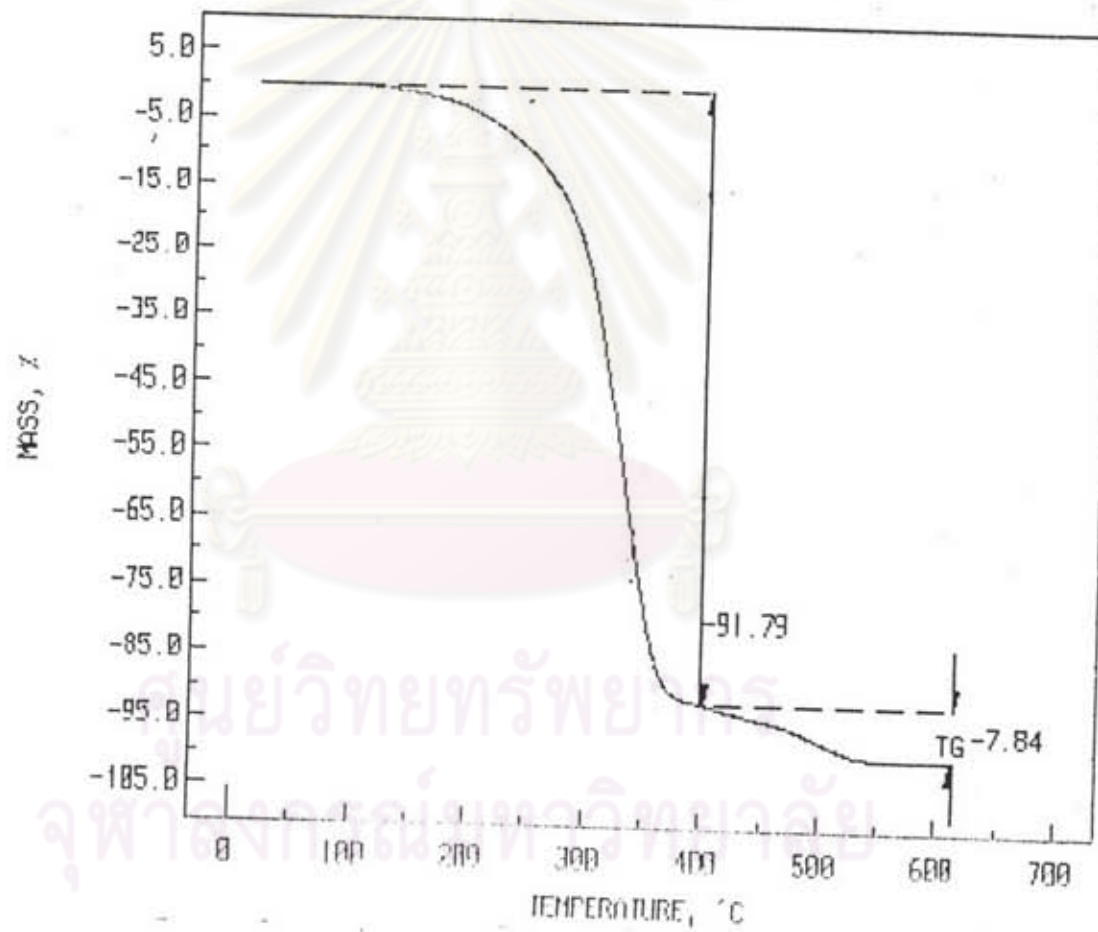


Figure A39 : Thermogram of hydrogenated 2-ethylhexyl monoester

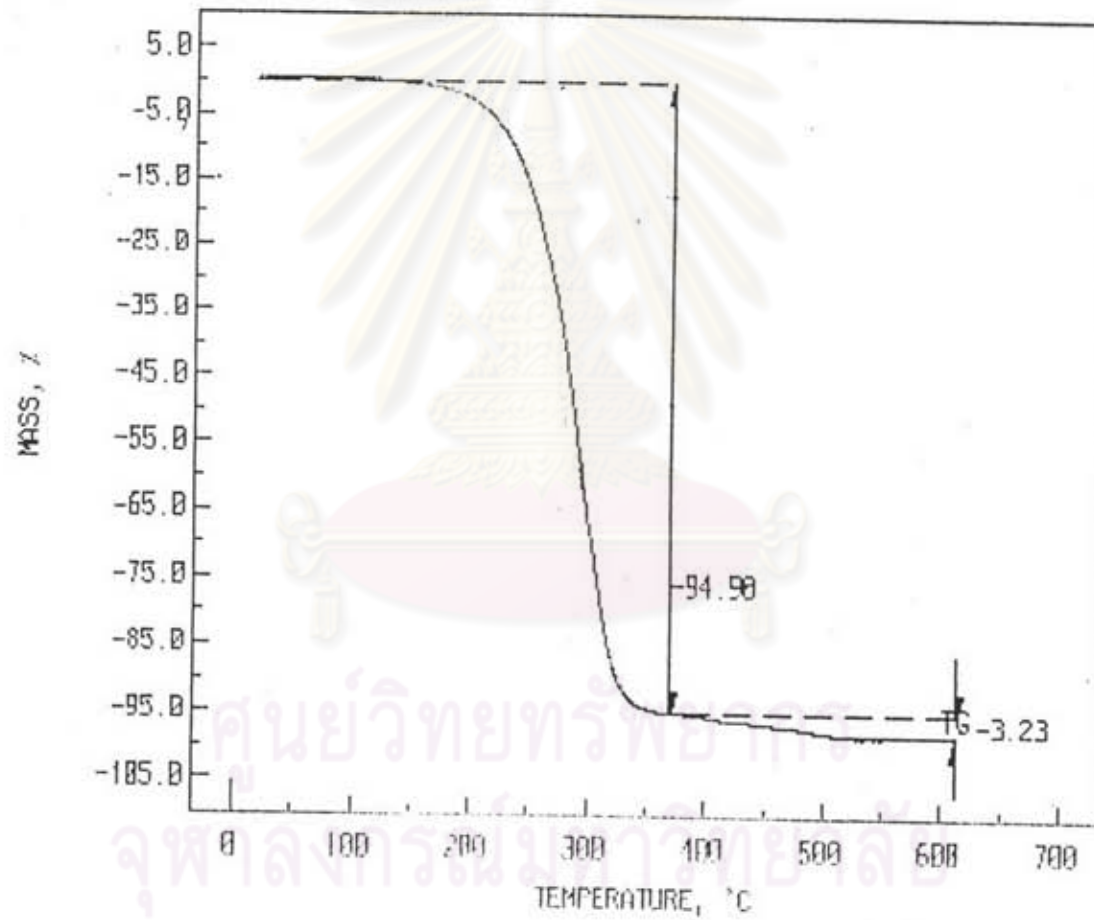


Figure A40 : Thermogram of cyclohexyl monoester

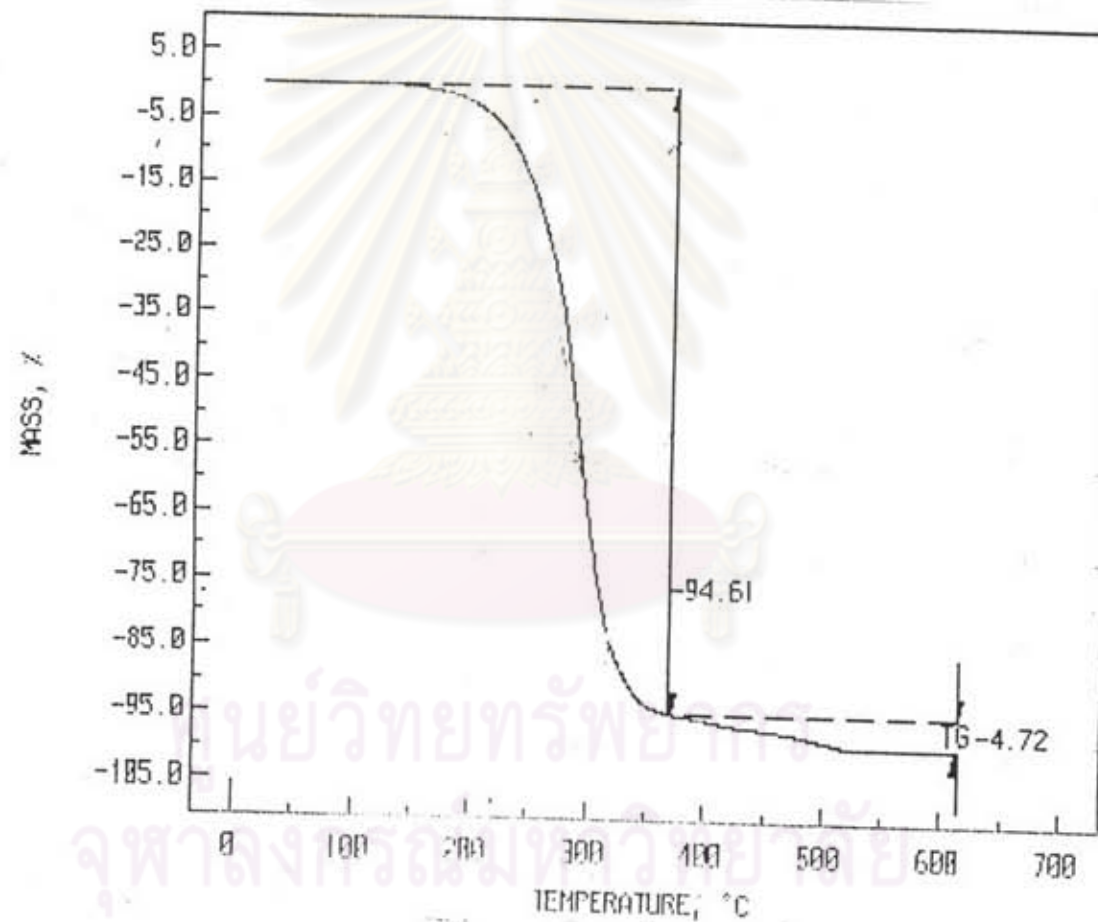


Figure A41 : Thermogram of hydrogenated cyclohexyl monoester

VITA

Miss Naiyachan Vatanaputi was born on March 1, 1971 in Lampang, She received a Bachelor Degree of Science in Industrial Chemistry from King Mongkut's Institutes of North Bangkok in 1993. She has been a graduate student studying Petrochemistry in Chulalongkorn University since 1993.



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