Supporting Information

Pyrene-Based Porous Organic Polymers as Efficient Catalytic Support for the Synthesis of Biodiesels at Room Temperature

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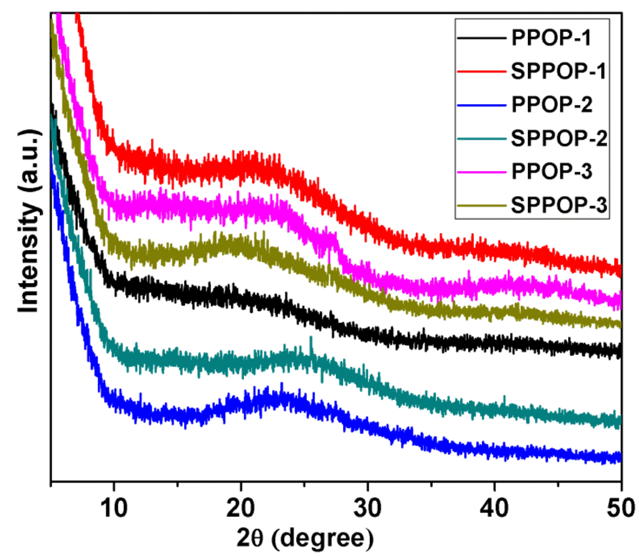


Figure S1. Wide angle powder XRD pattern of pyrene based organic polymers and corresponding sulfonated polymers.

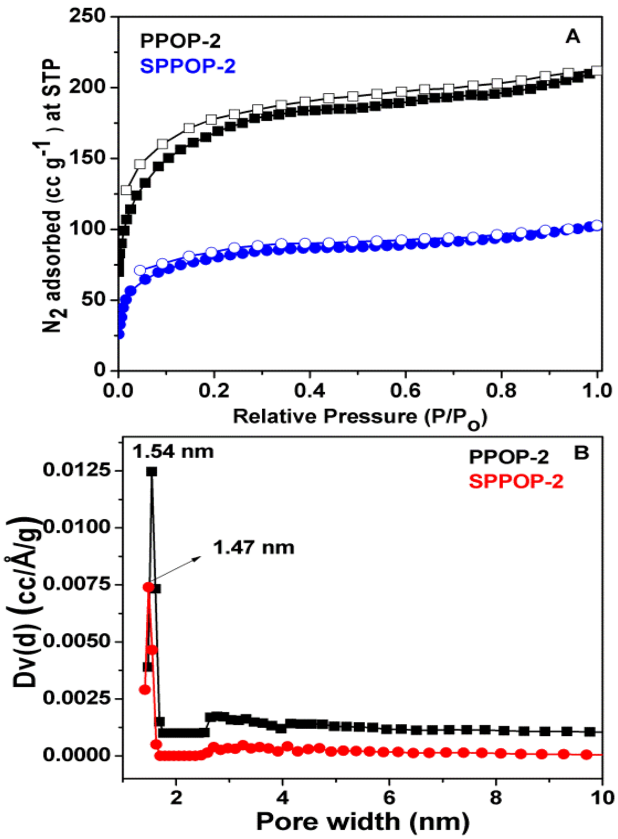


Figure S2. N_2 adsorption-desorption isotherms (A) and pore size distributions (B) of PPOP-2 and SPPOP-2, respectively.

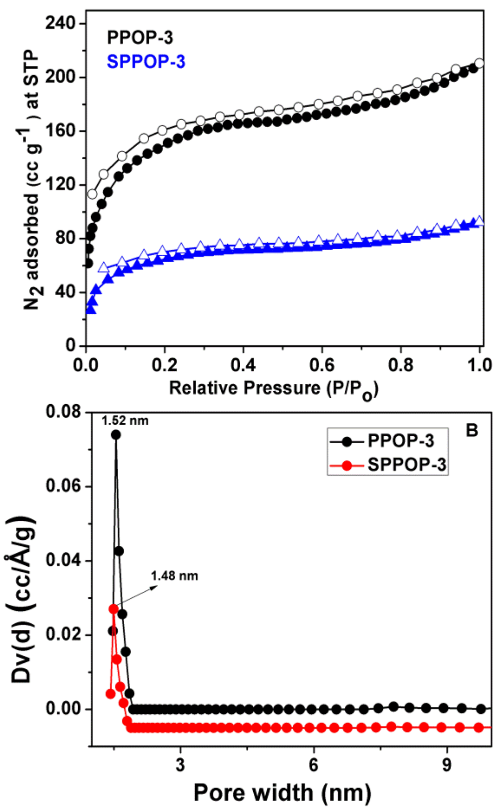


Figure S3. N_2 adsorption-desorption isotherms (A) and pore size distributions (B) of PPOP-3 and SPPOP-3, respectively.

Table 1S.Physical properties of PPOP-2,3 and corresponding sulfonated polymers

Polymer	Pore diameter (nm)	BET surface area (m^2g^{-1})	Total pore volume (ccg^{-1})
PPOP-2	1.54	570	0.3595
PPOP-3	1.52	508	0.3186
SPPOP-2	1.47	244	0.1751
SPPOP-3	1.48	205	0.1539

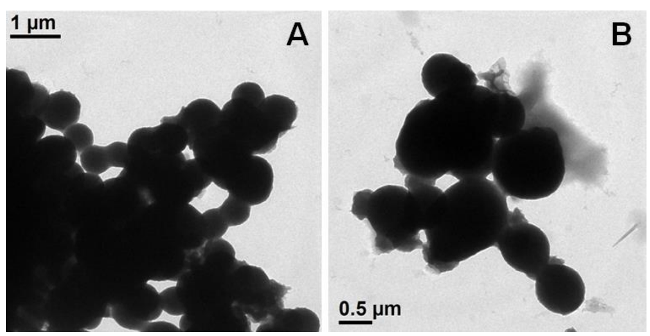


Figure S4. TEM images of SPPOP-3 polymer

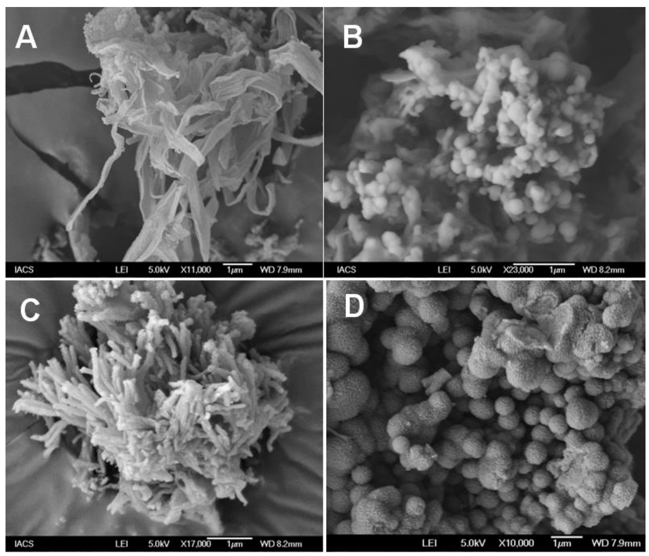


Figure S5. FE SEM images of PPOP-2 (A), SPPOP-2 (B), PPOP-3 (C) and SPPOP-3 (D).

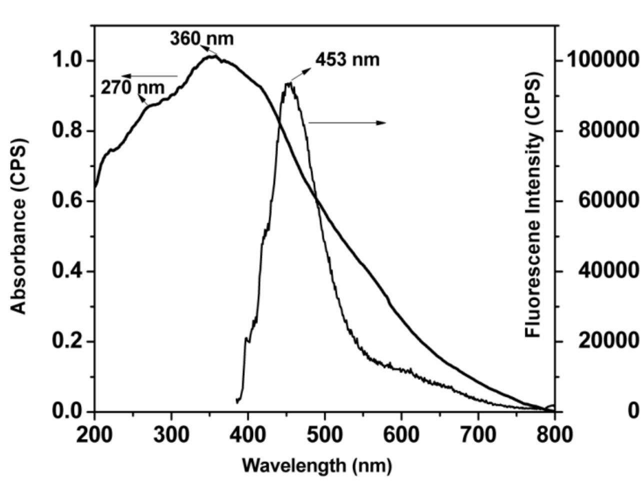


Figure S6. UV-visible absorption and photoluminescence spectra of PPOP-1.

UV-Vis absorption and photoluminescence spectra of PPOP-1 polymer are shown in FigureS2. UV-Vis absorption spectra showed broad band at 360 nm due to $\pi \rightarrow \pi^*$ transition of the π-conjugated pyrene rings. PPOP-1 exhibits strong photoluminescence properties and showed emission with wavelength maxima at *ca*. 453 nm.

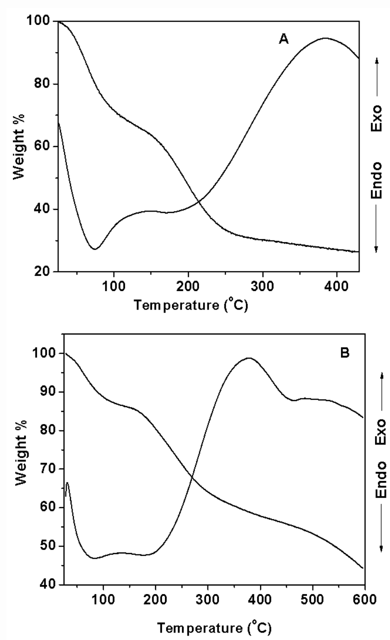


Figure S7. TG-DTA profiles of SPPOP-2 (A) and SPPOP-3 (B).

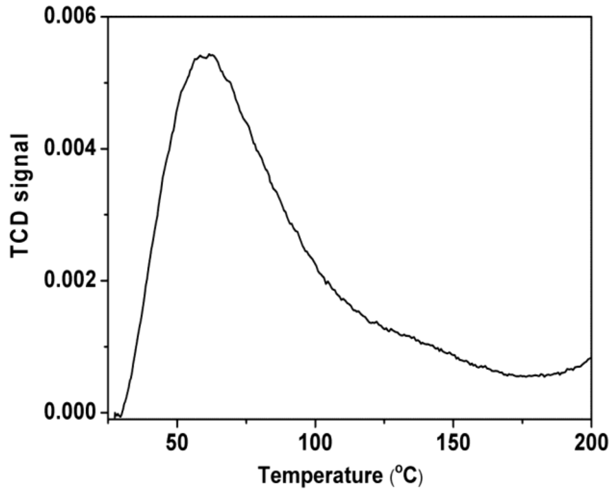


Figure S8 NH_3-TPD profile for SPPOP-2

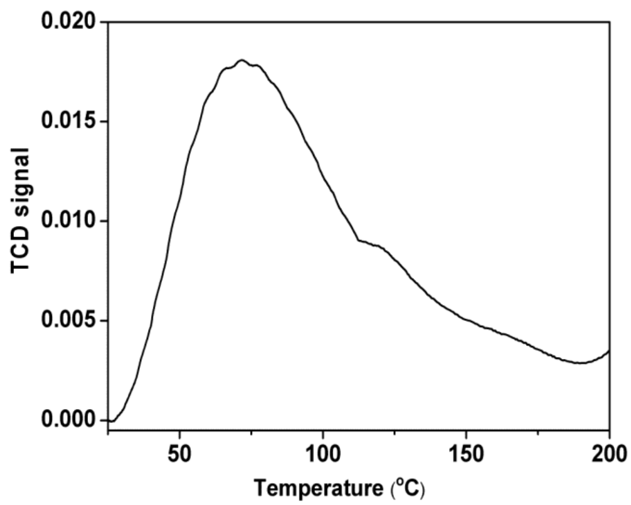


Figure S9 NH_3-TPD profile for SPPOP-3

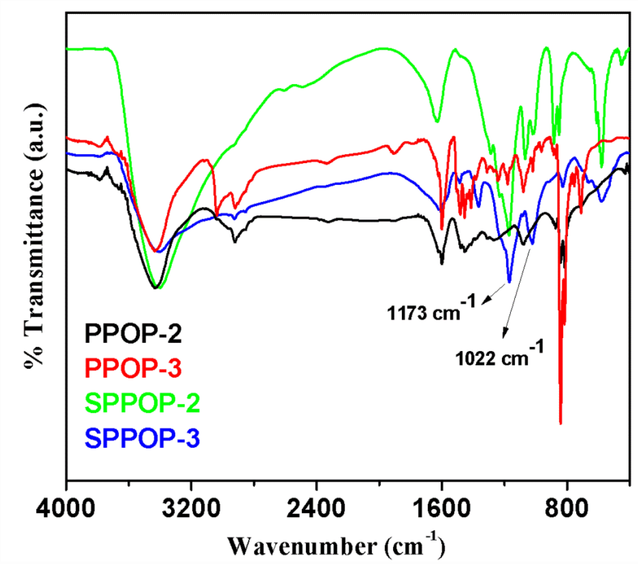
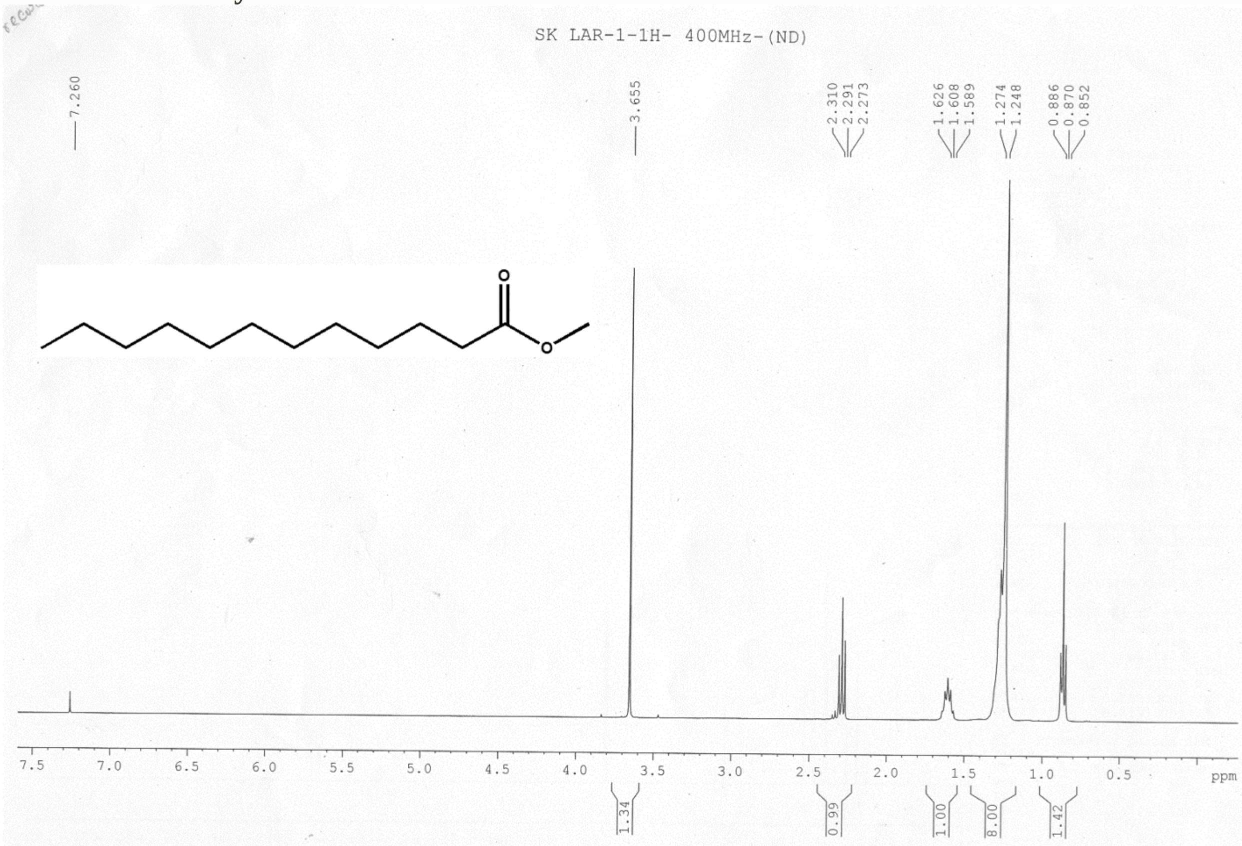
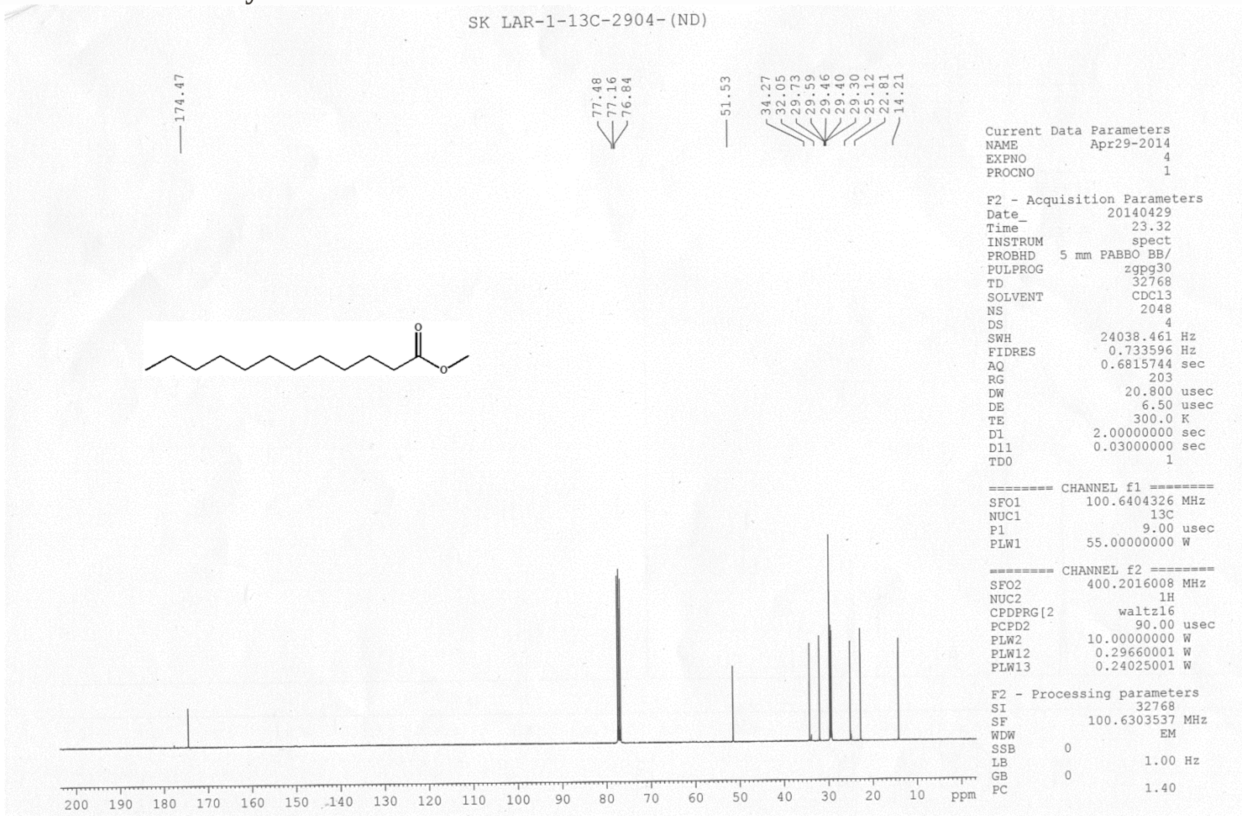


Figure S10. FT IR spectra of PPOP-2,3 and SPPOP-2,3

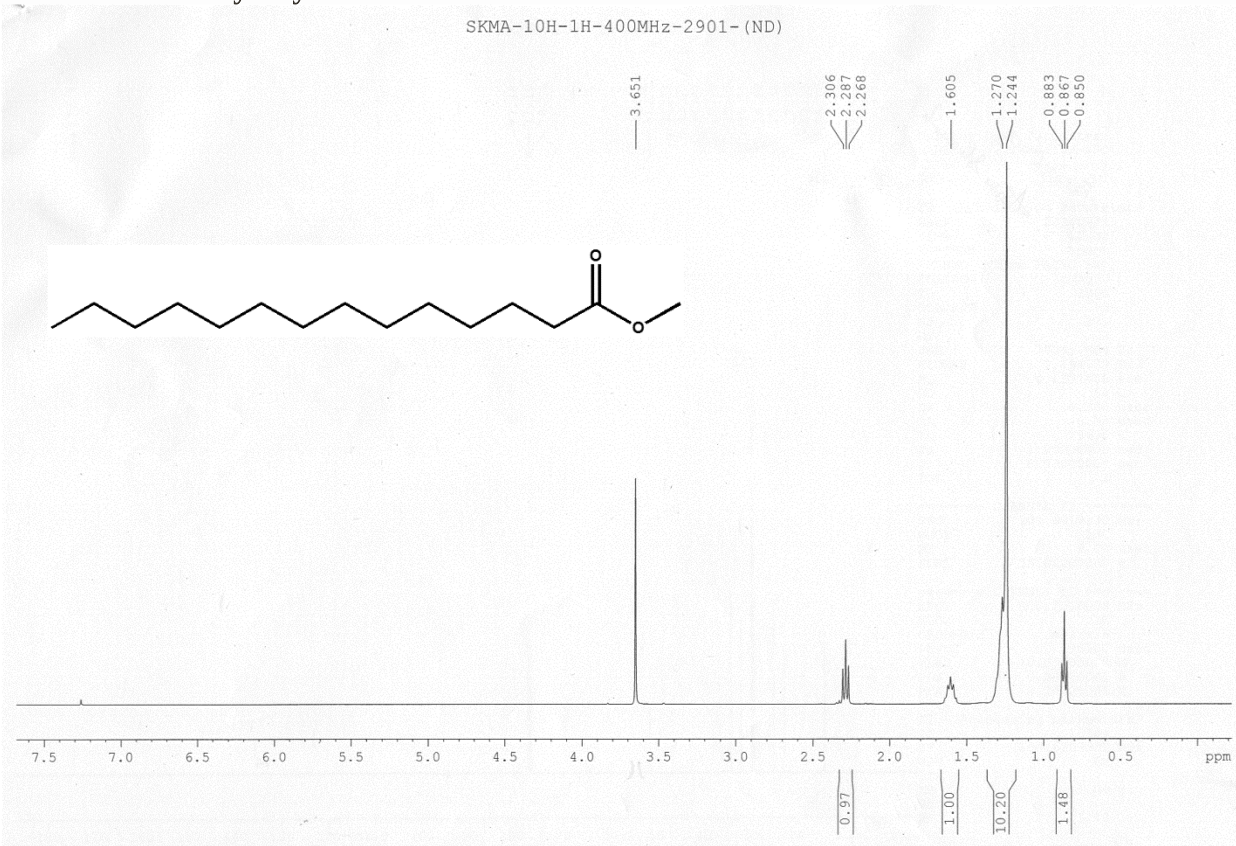
^{1}H NMR of Methyl laurate



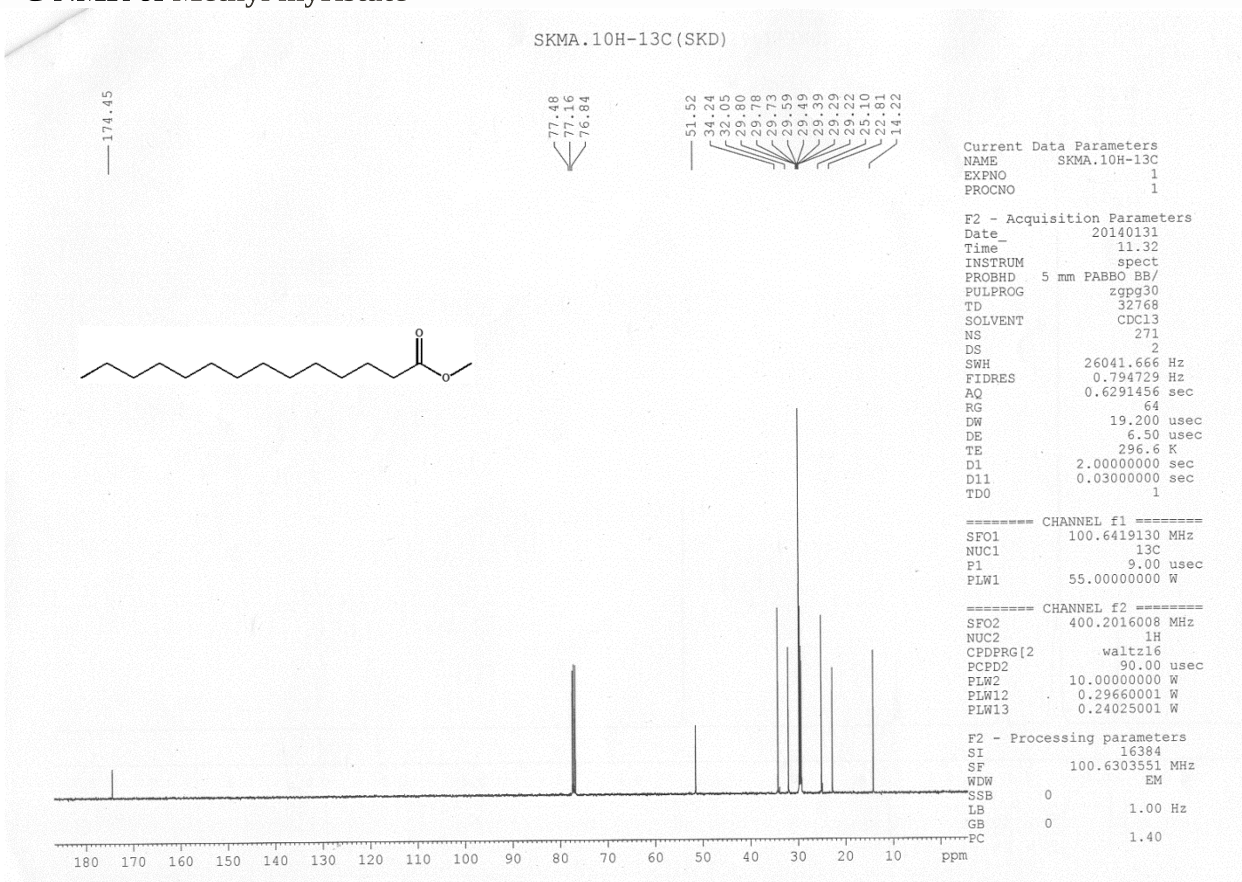
^{13}C NMR of Methyl laurate



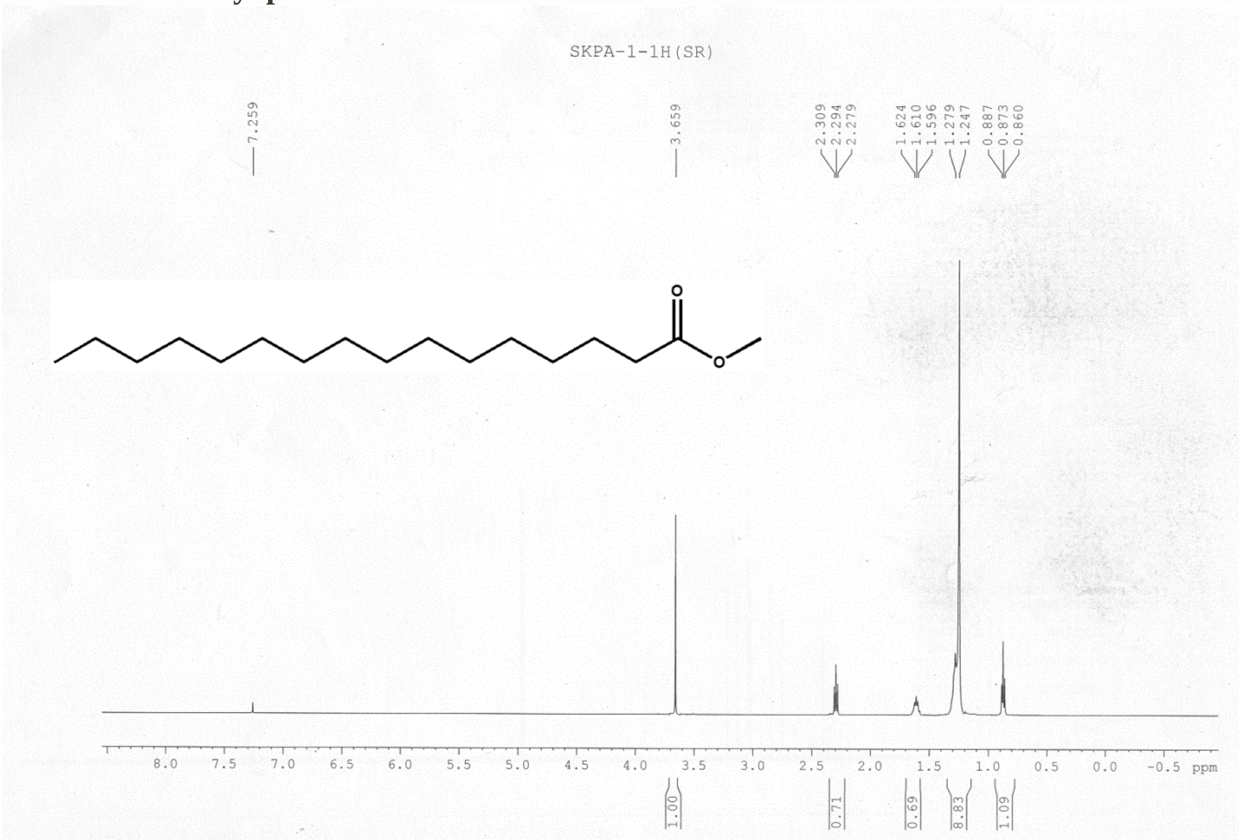
^{1}H NMR of Methyl myristate



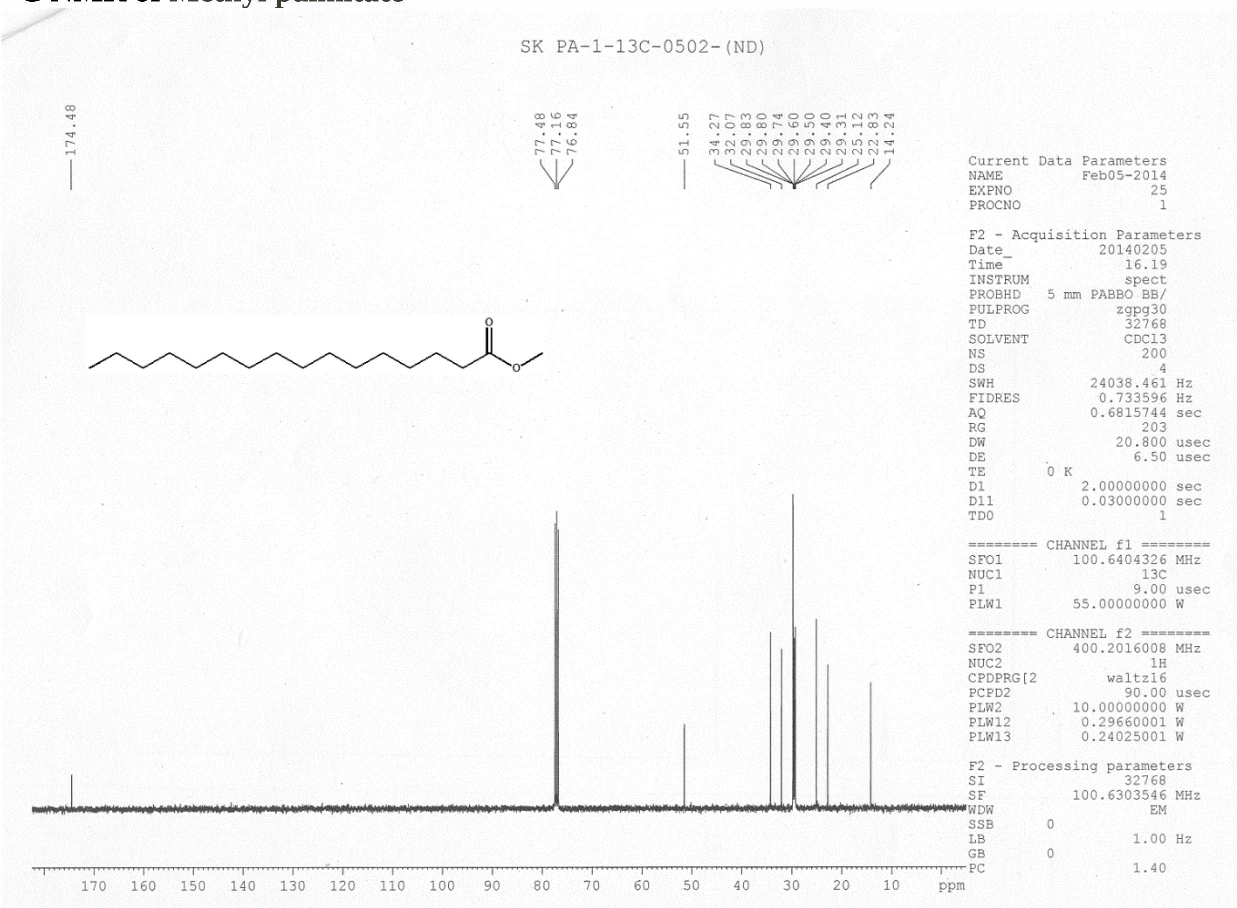
^{13}C NMR of Methyl myristate



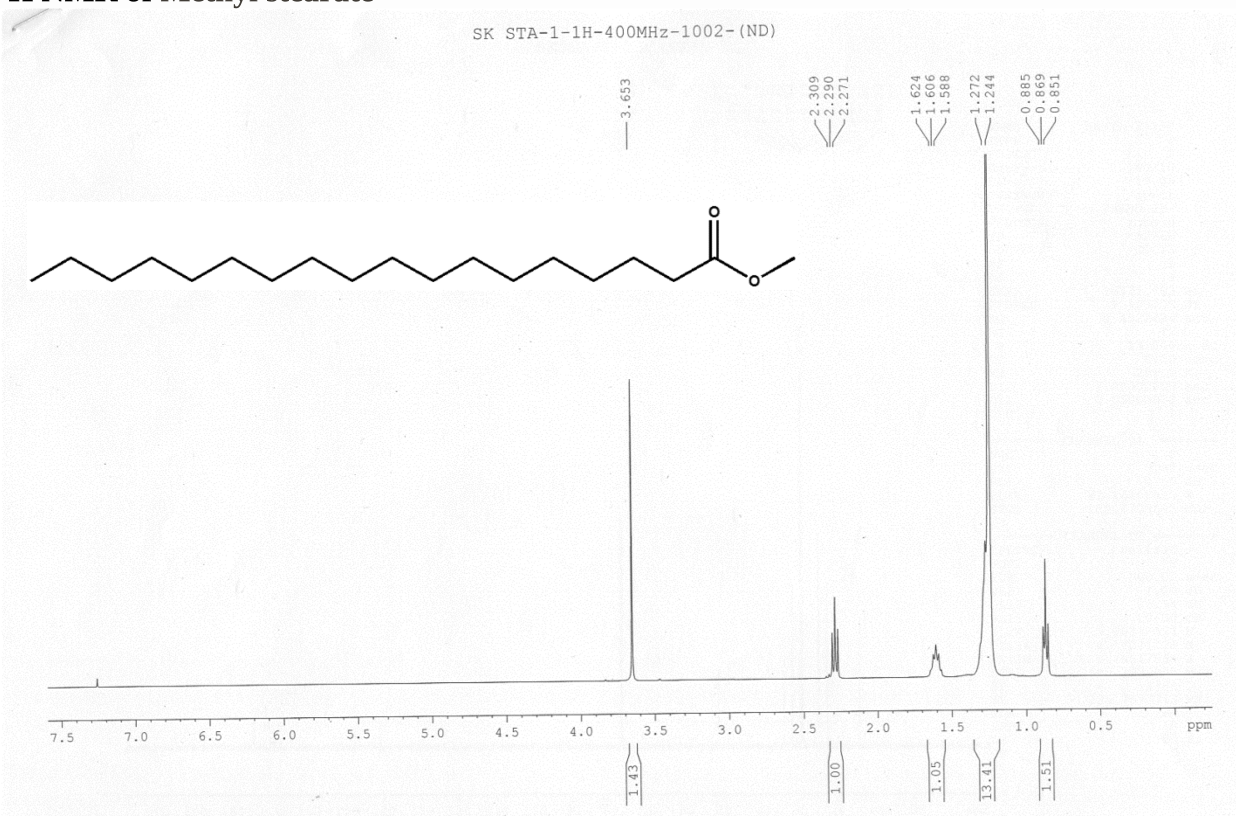
^{1}H NMR of Methyl palmitate



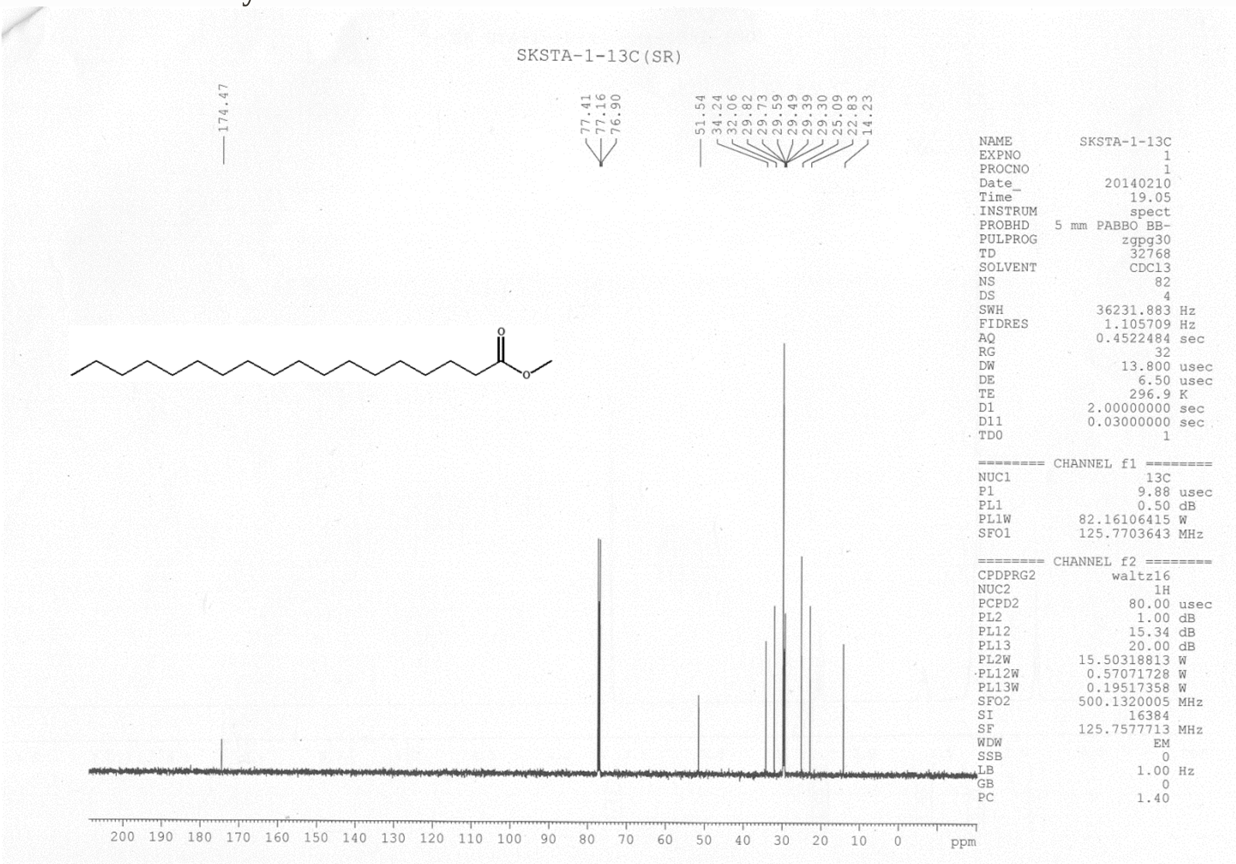
^{13}C NMR of Methyl palmitate



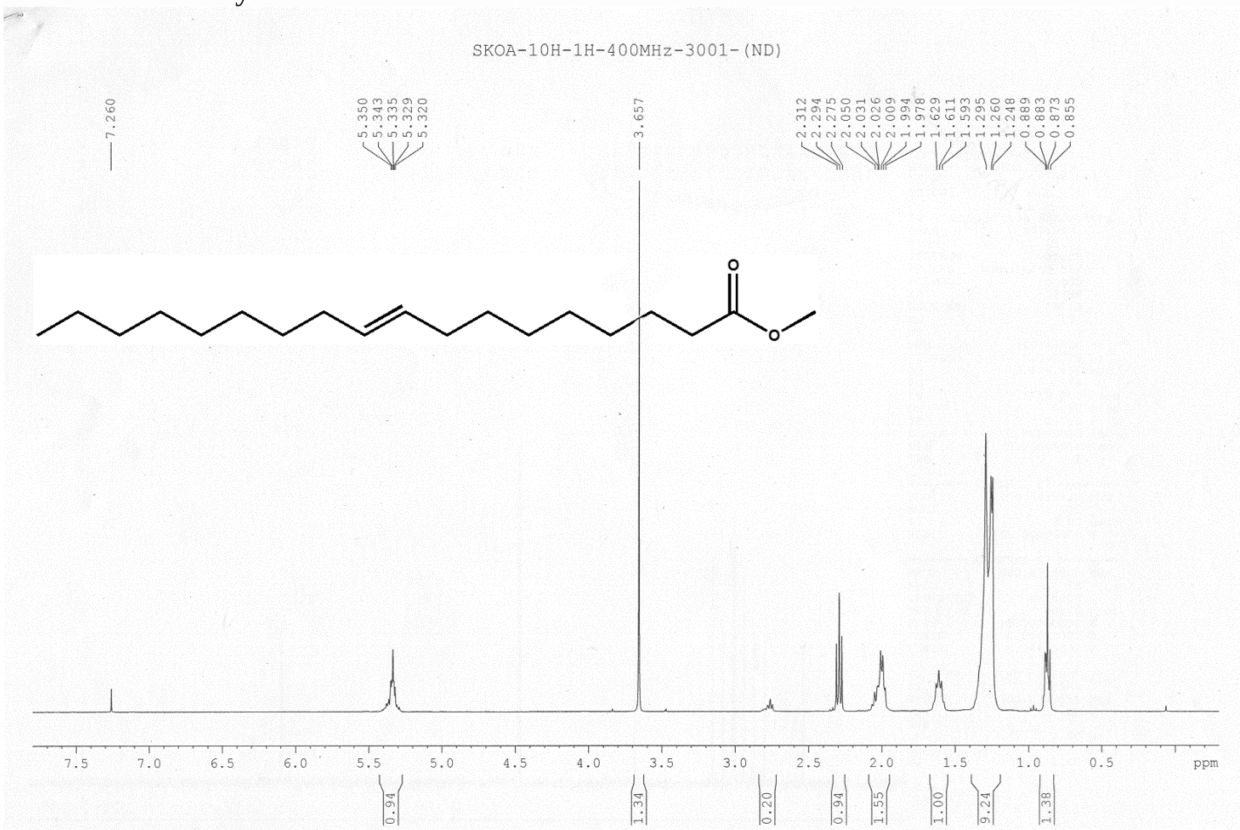
^{1}H NMR of Methyl stearate



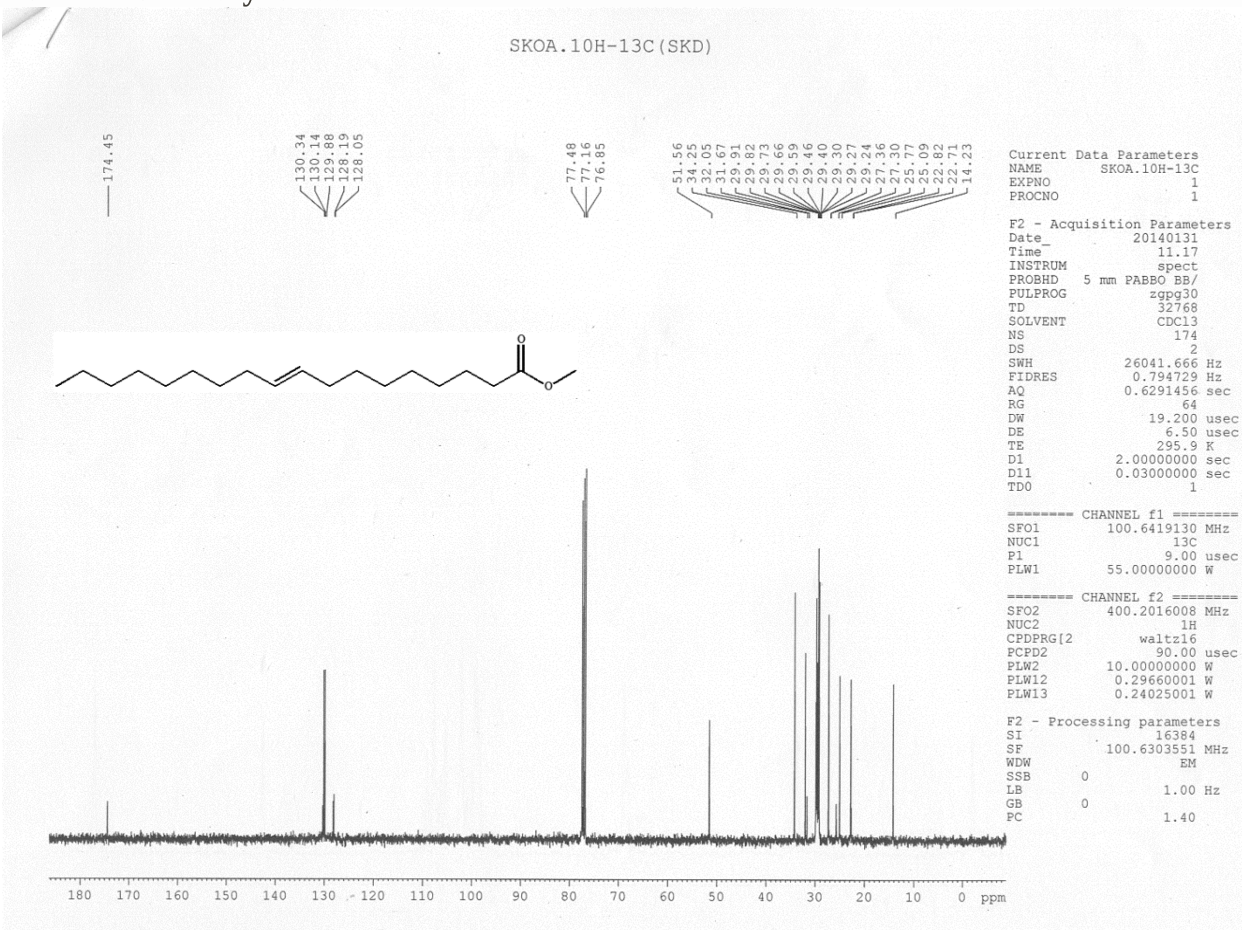
^{13}C NMR of Methyl stearate



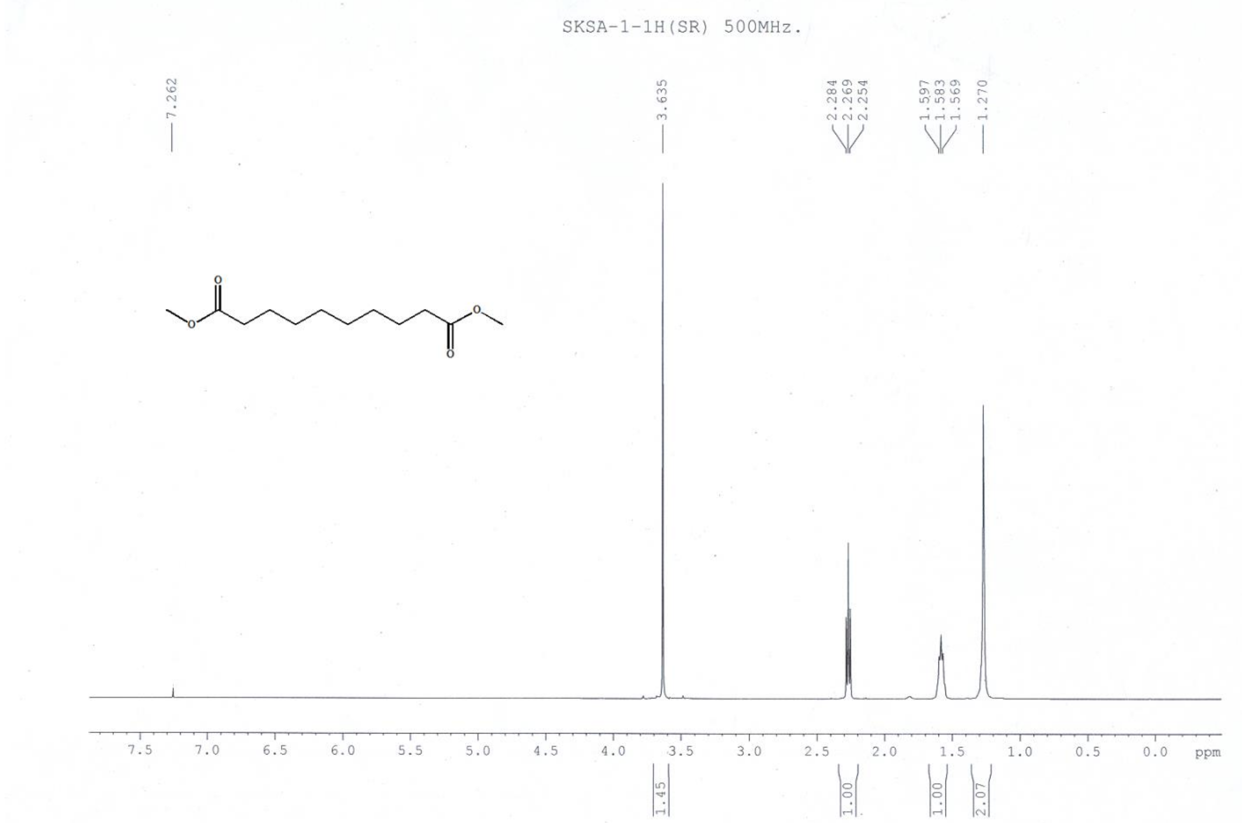
^{1}H NMR of Methyl oleate



^{13}C NMR of Methyl oleate



^{1}H NMR of Dimethyl sebacate



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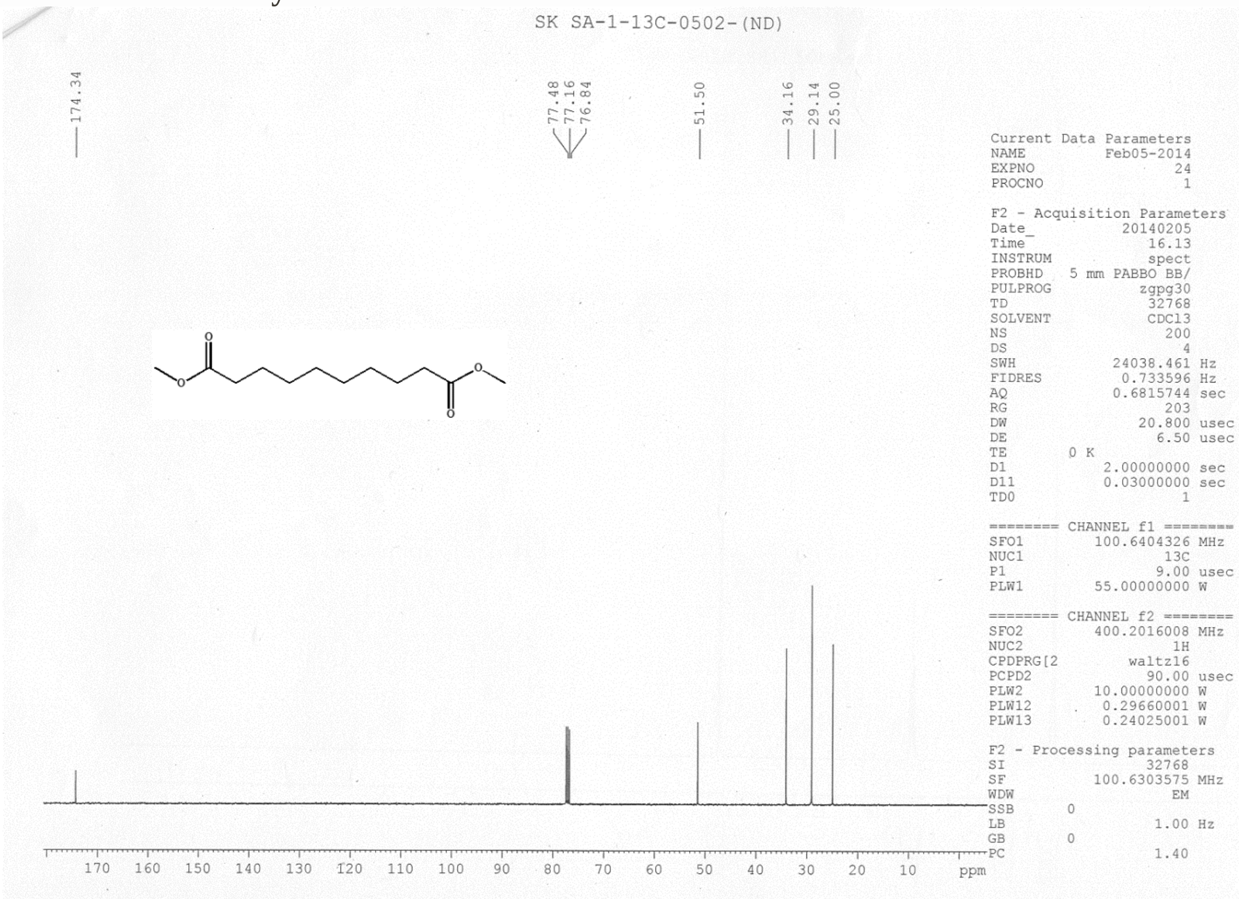
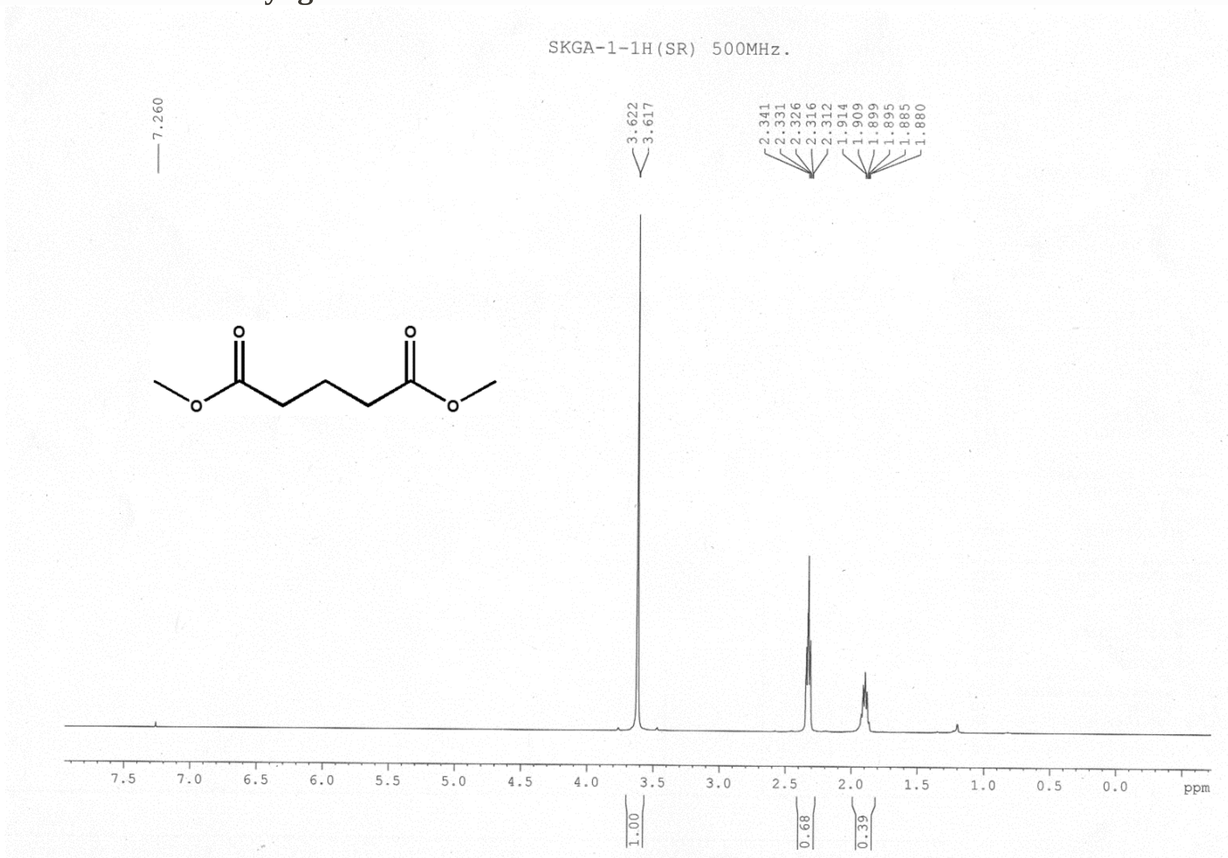
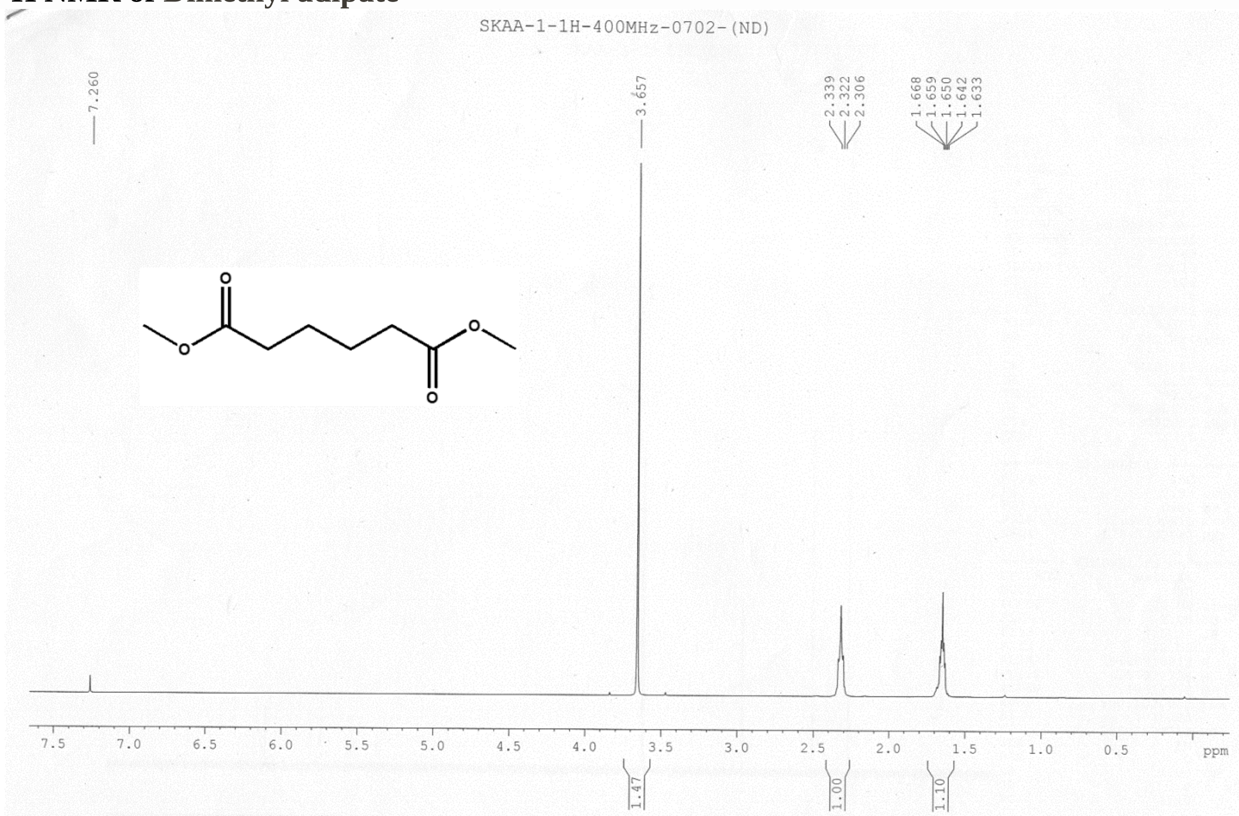


^{1}H NMR of Dimethyl glutarate

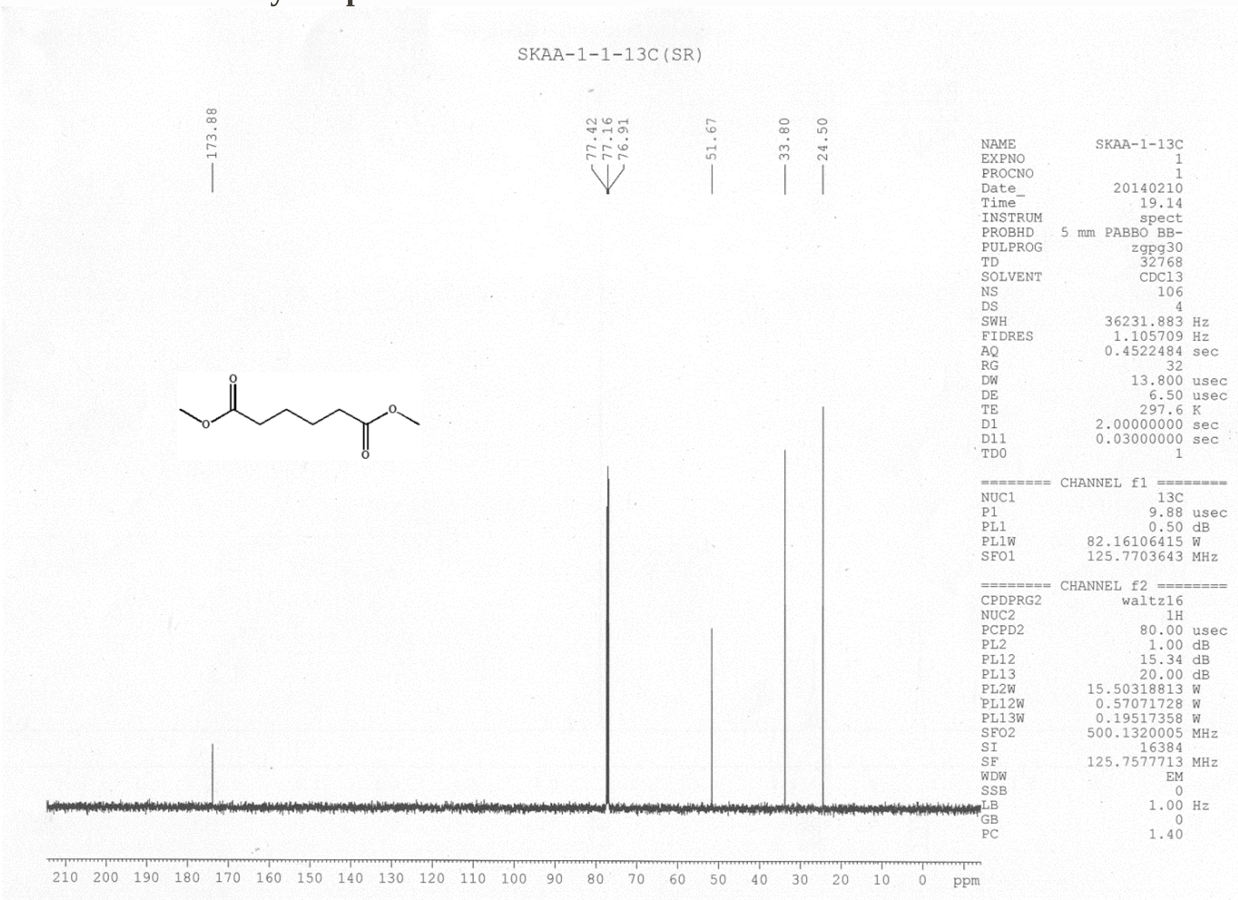


^{13}C NMR of Dimethyl glutarate

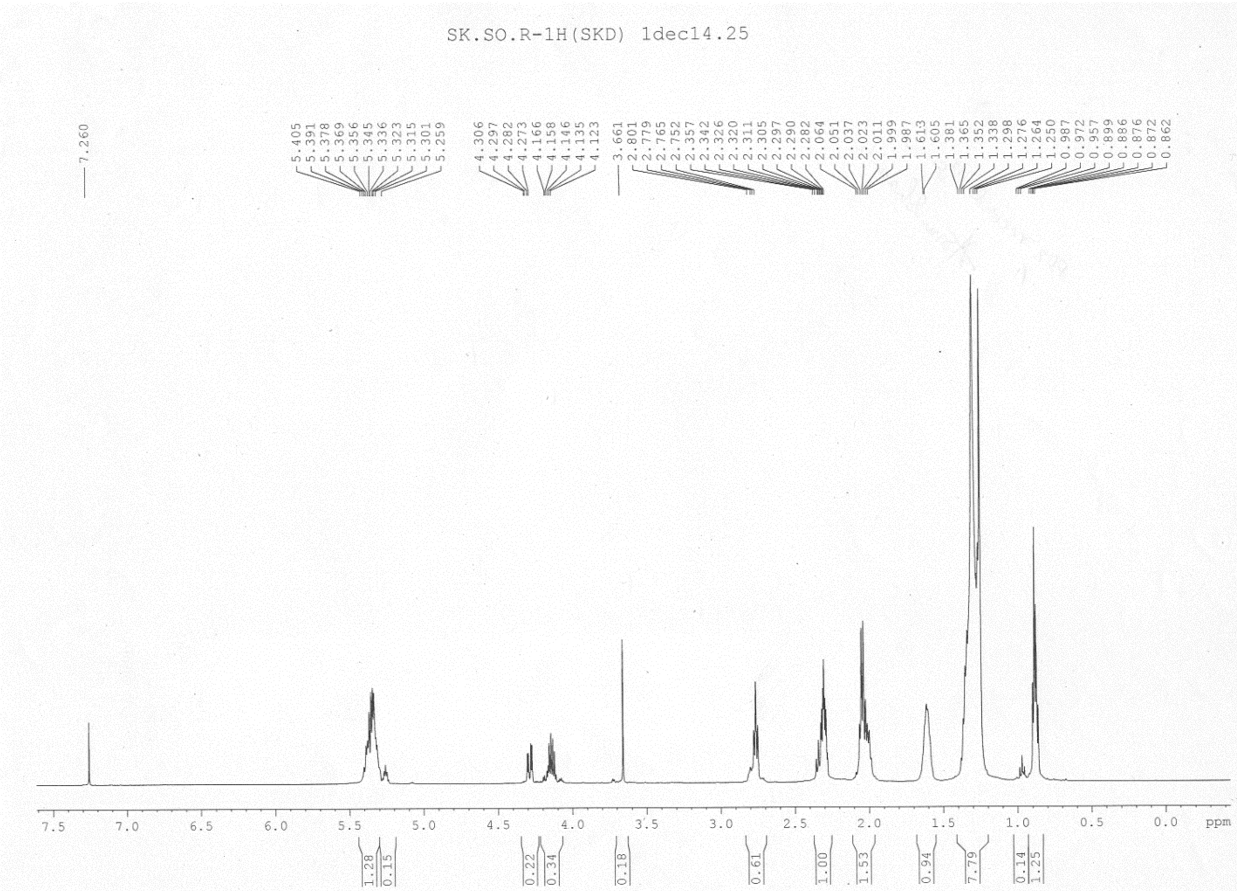
^{1}H NMR of Dimethyl adipate



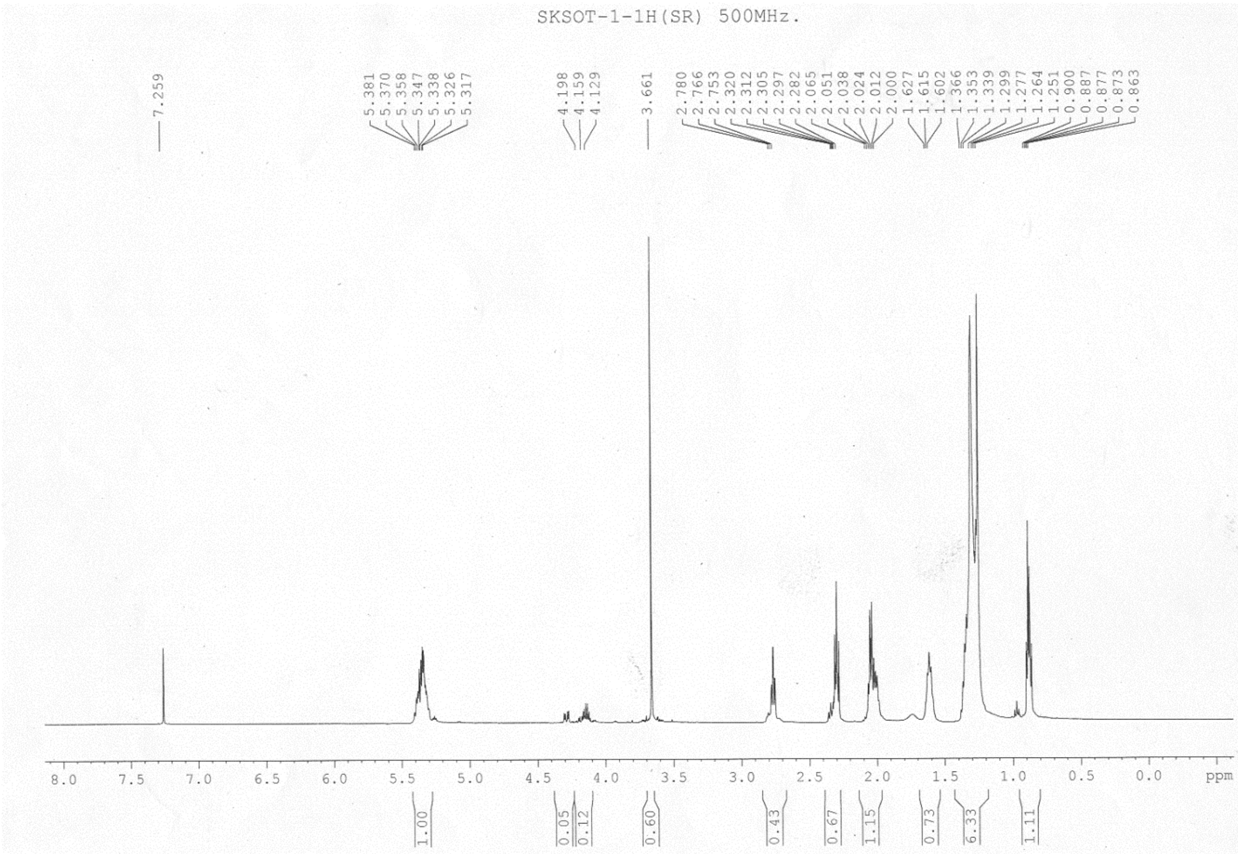
^{13}C NMR of Dimethyl adipate



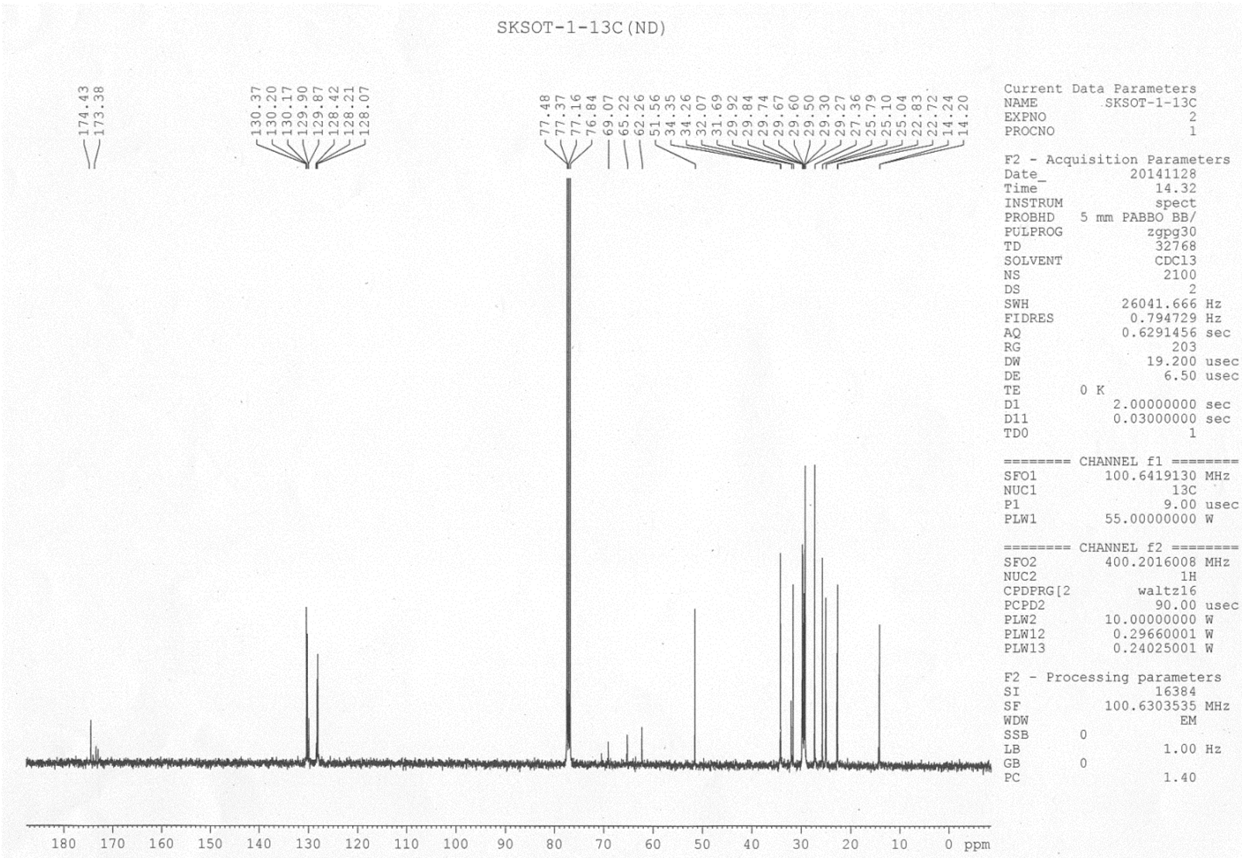
^1H NMR spectrum of transesterification of soybean oil at 25°C over SPPOP-1



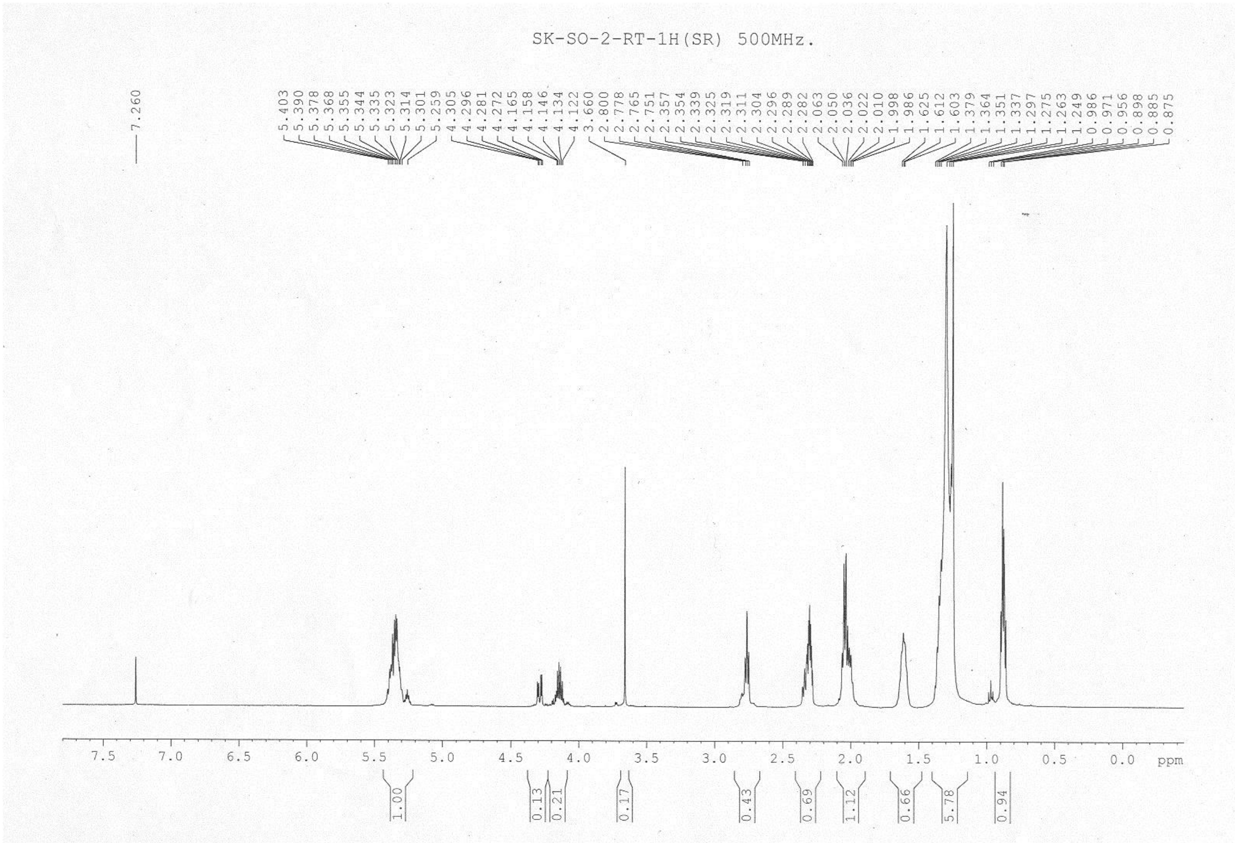
[1]H NMR spectrum of transesterification of soybean oil at 60^{o}C over SPPOP-1



^{13}C NMR spectrum of transesterification of soybean oil at 60^{o}C over SPPOP-1



[1]H NMR spectrum of transesterification of soybean oil at 25^{o}C over SPPOP-2



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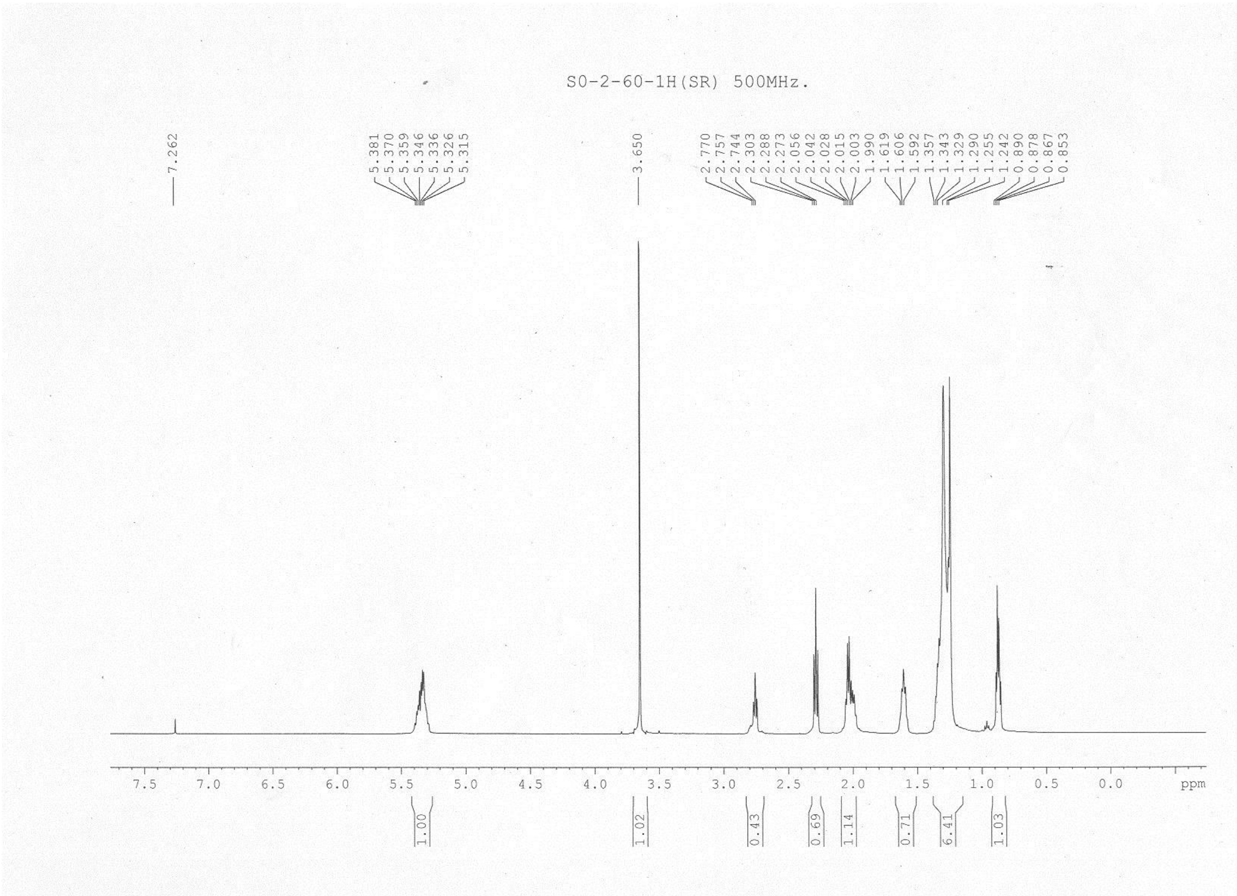
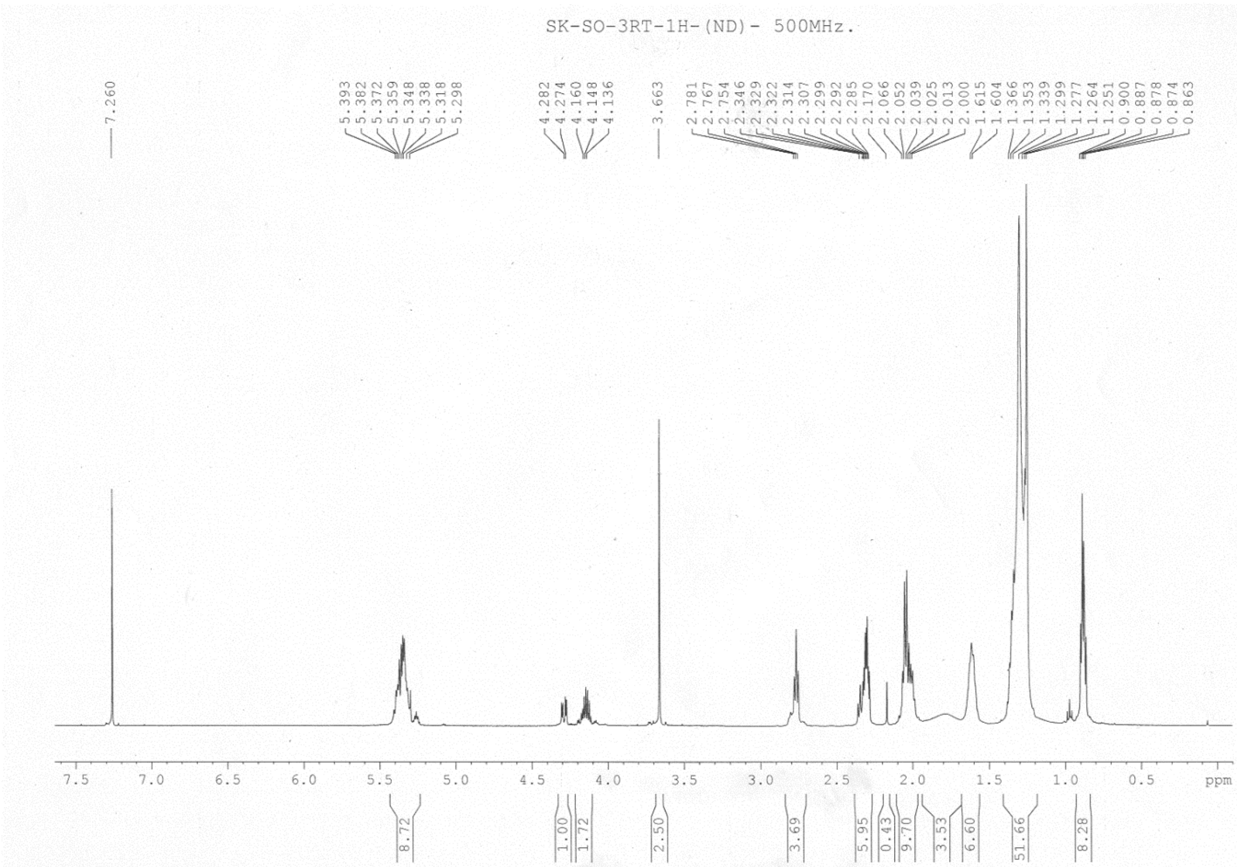
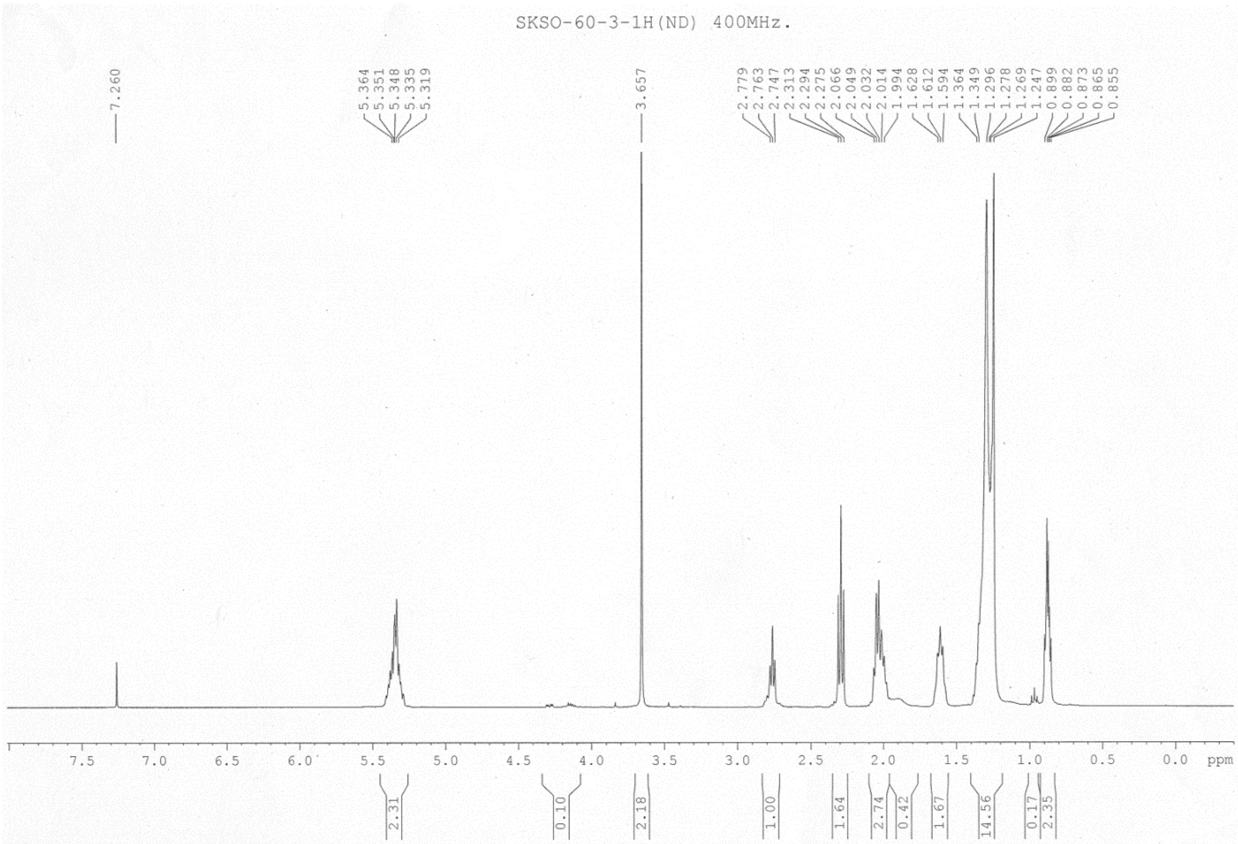


^1H NMR spectrum of transesterification of soybean oil at 25°C over SPPOP-3



^{1}H NMR spectrum of transesterification of soybean oil at 60^{o}C over SPPOP-3



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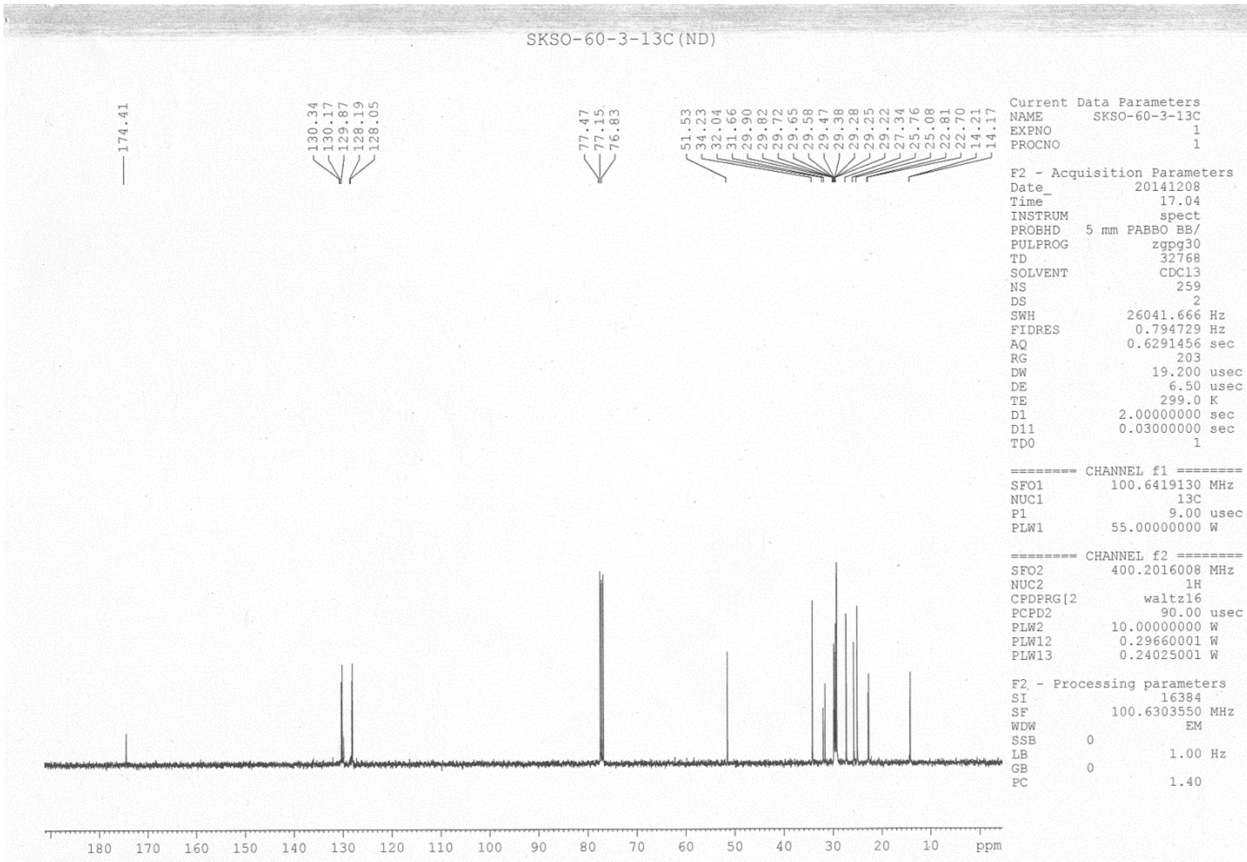
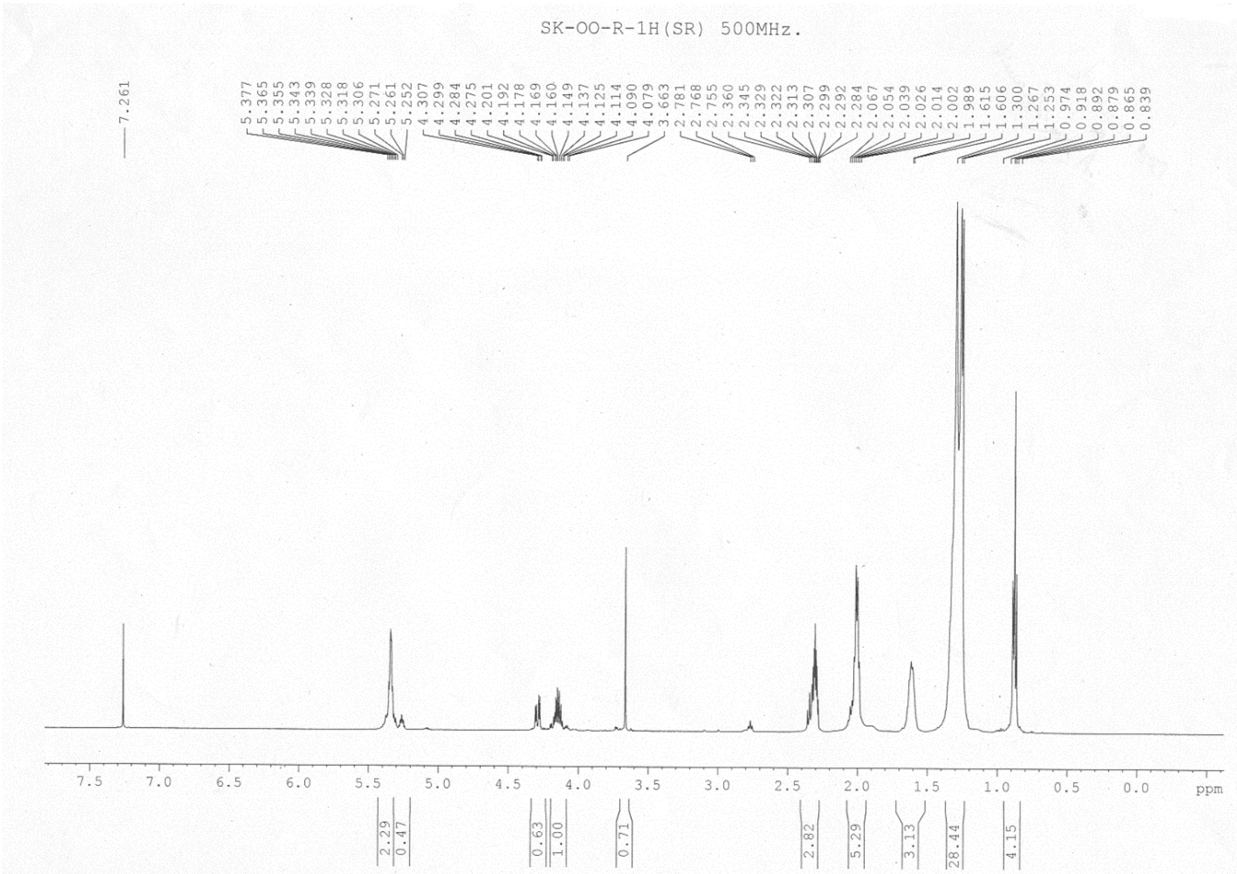


[1]H NMR spectrum of transesterification of olive oil at 25°C over SPPOP-1



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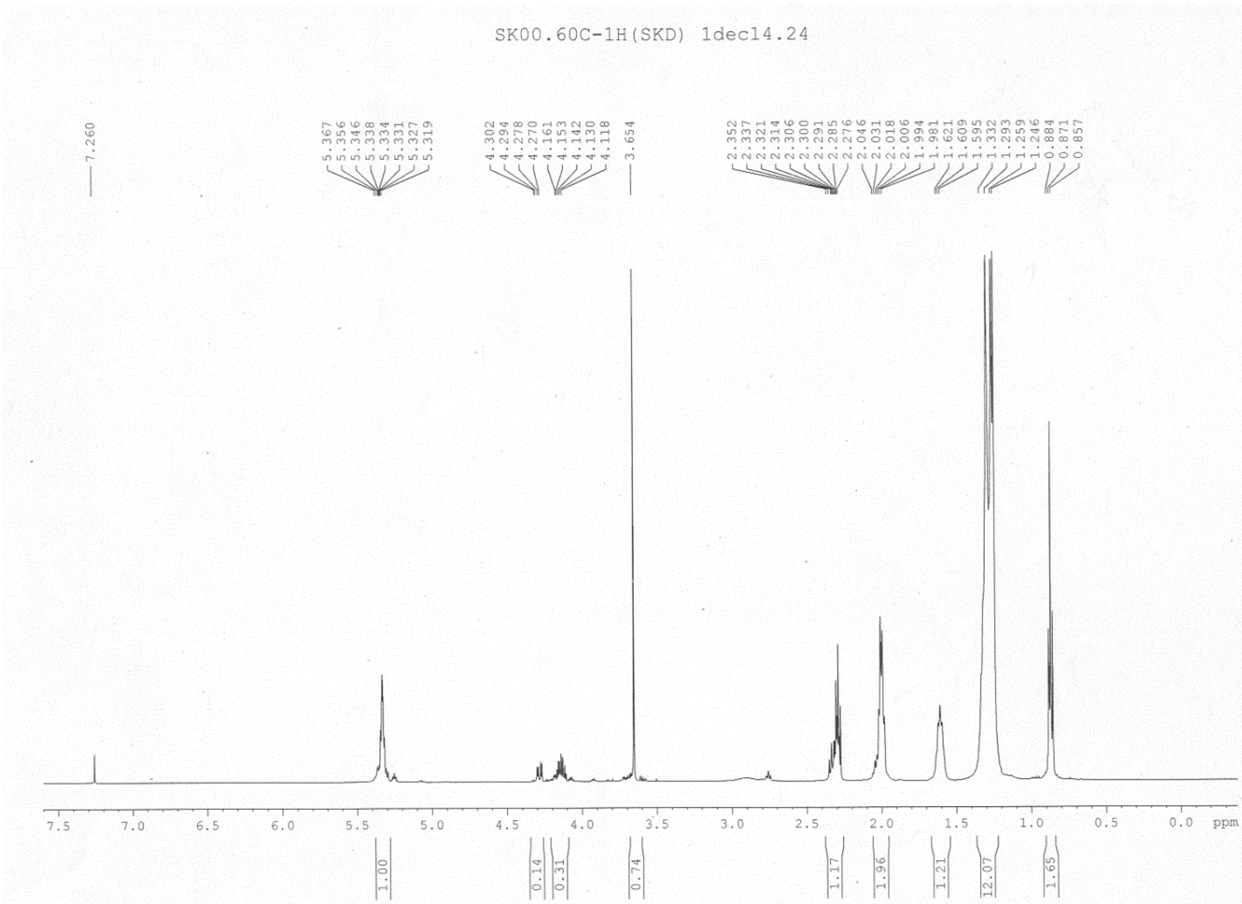

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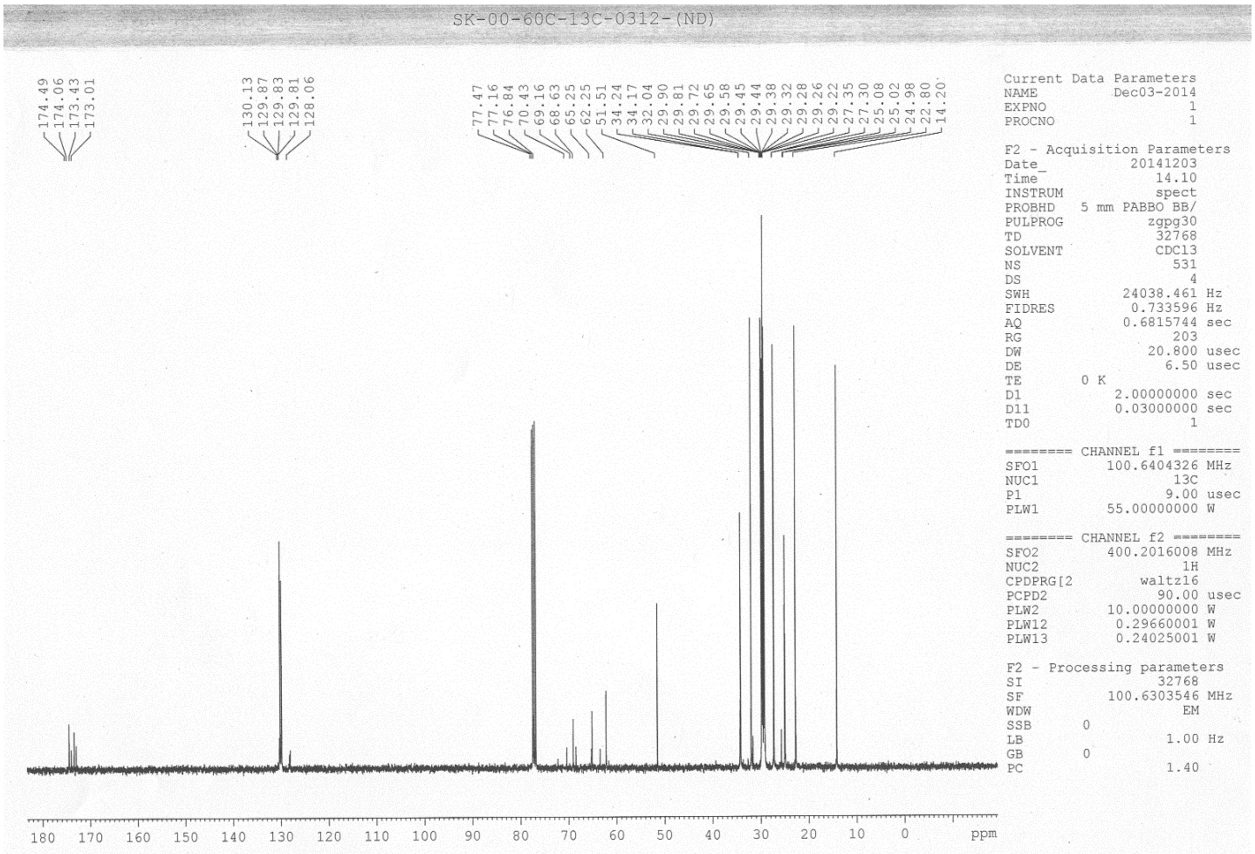
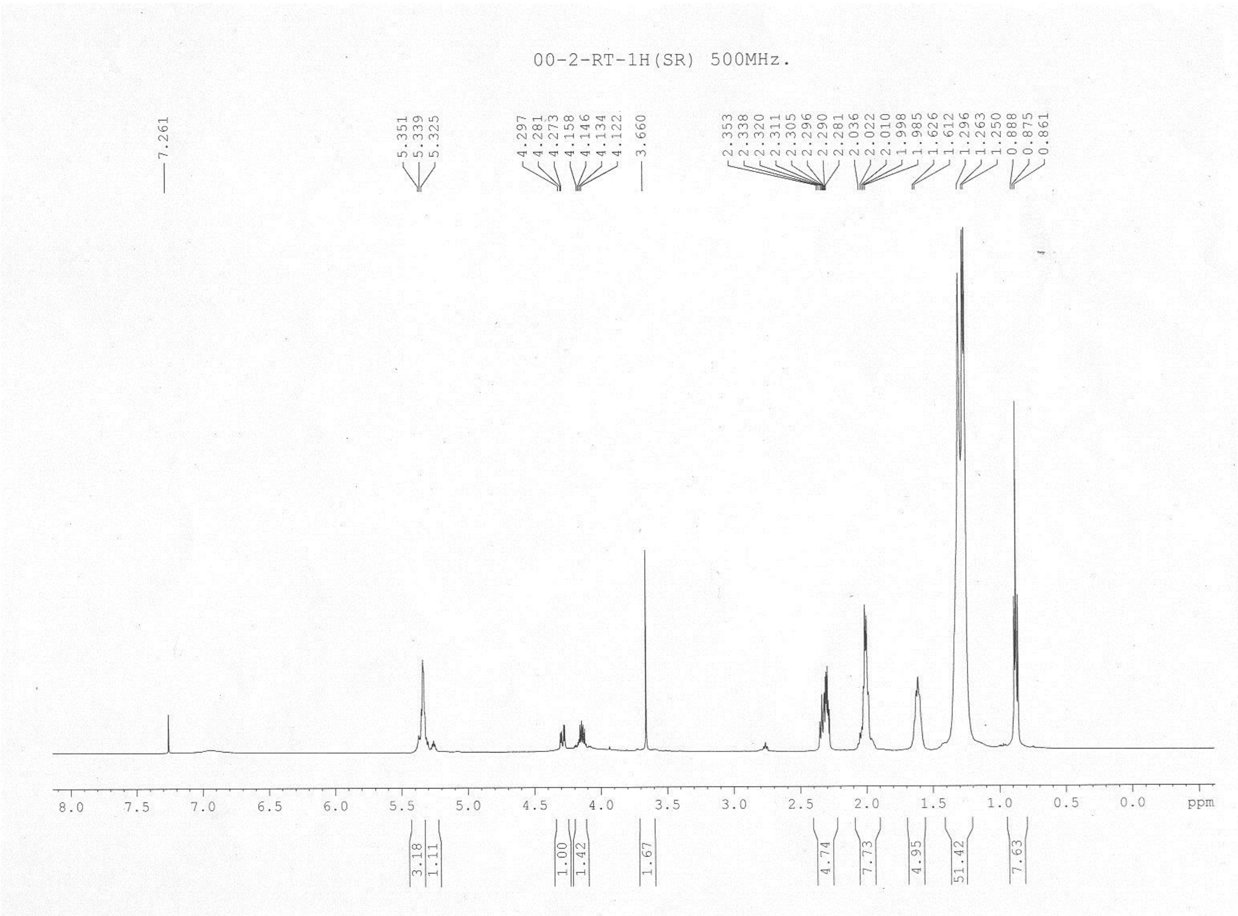
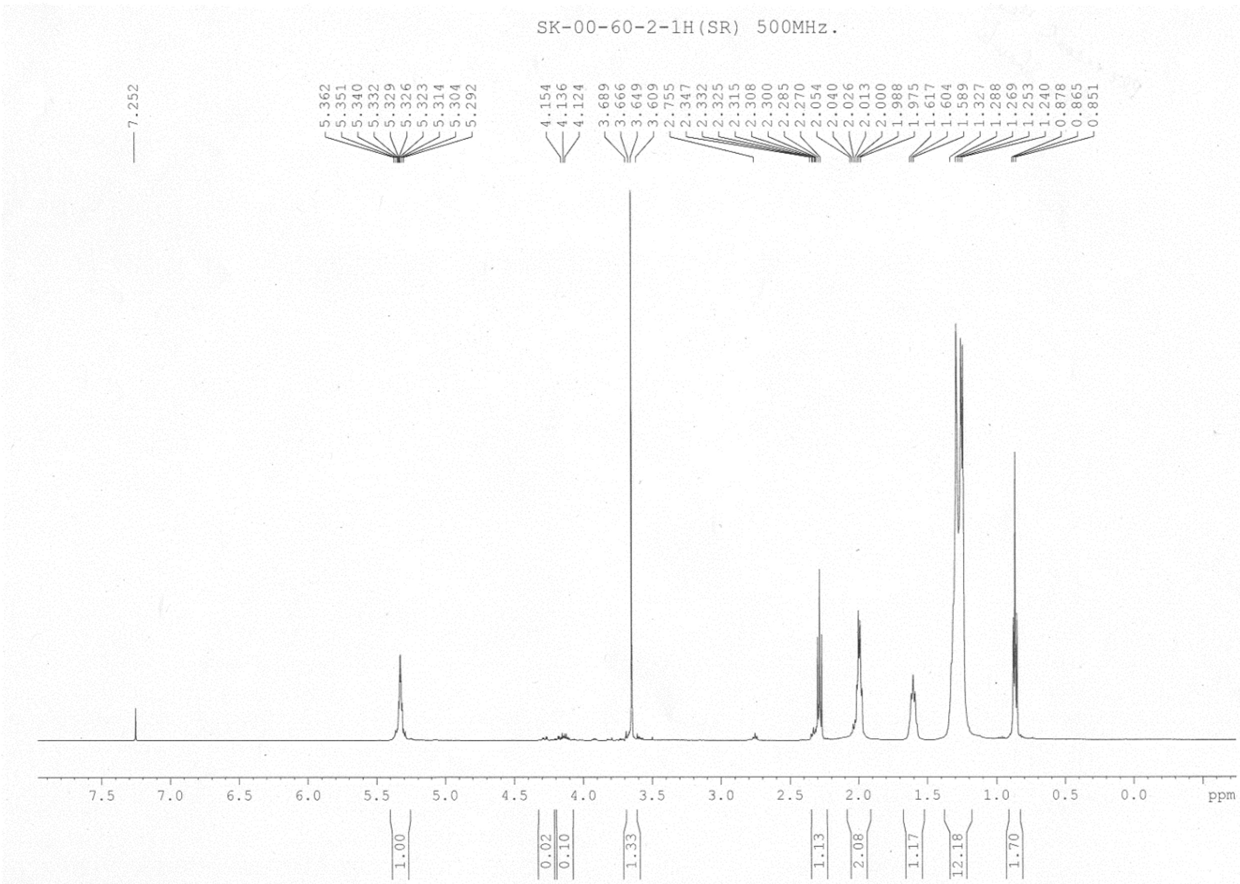


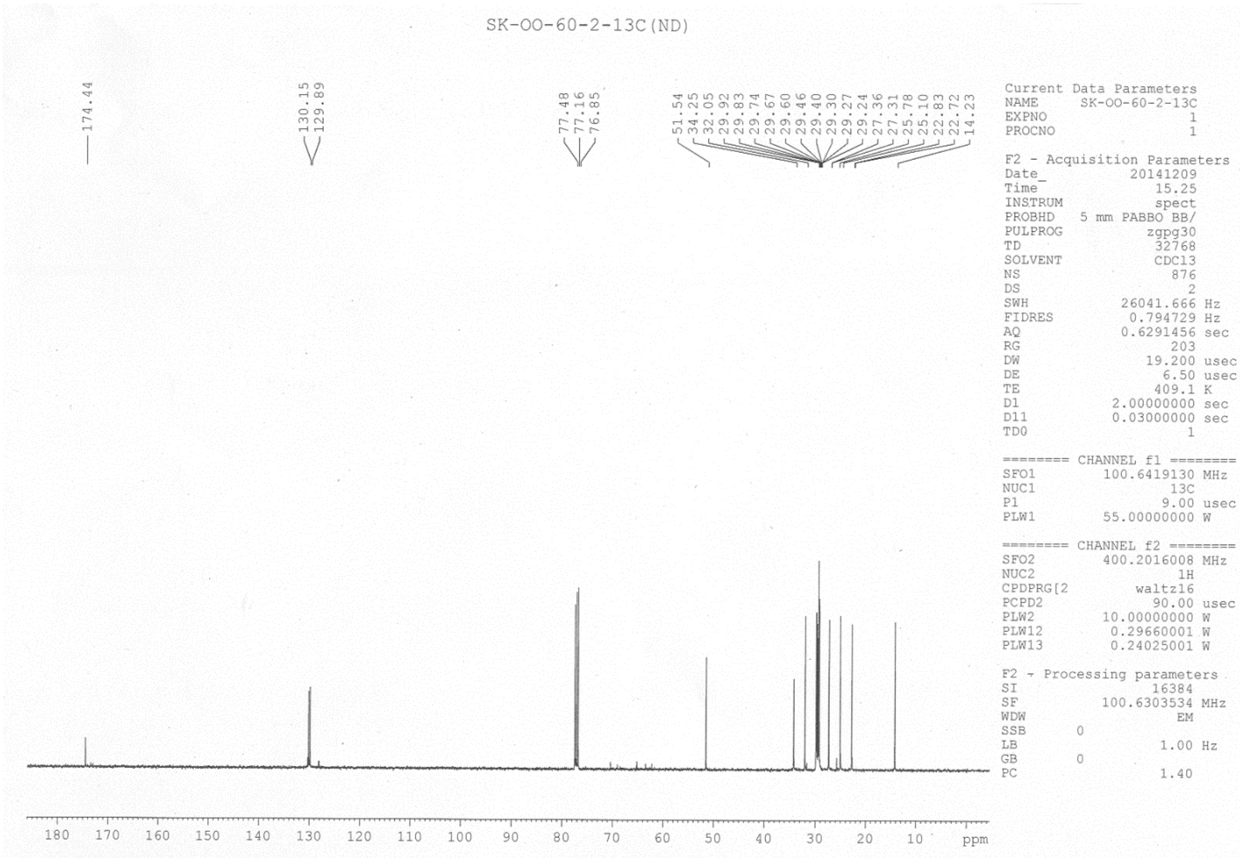
[1]H NMR spectrum of transesterification of olive oil at 25°C over SPPOP-2



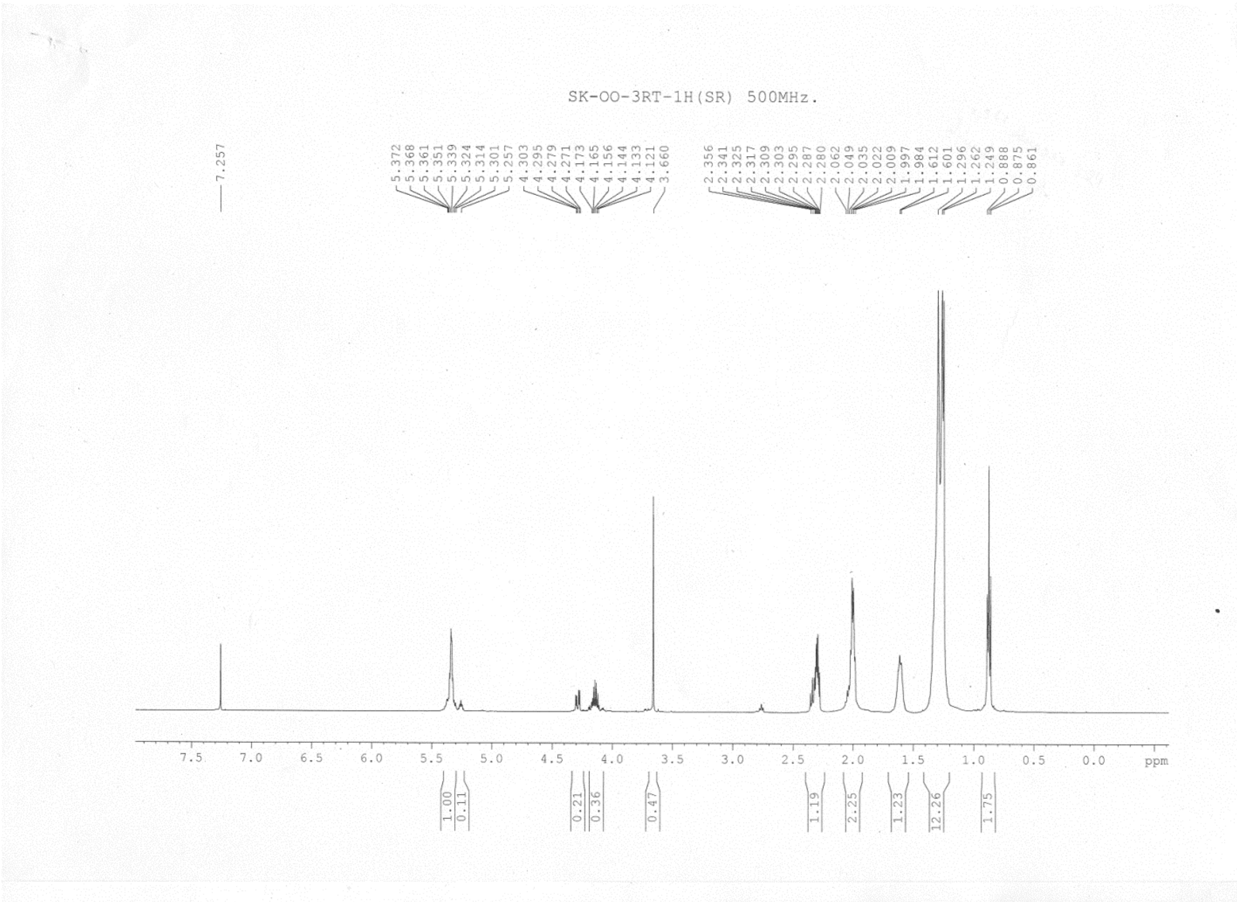
^{1}H NMR spectrum of transesterification of olive oil at 60°C over SPPOP-2



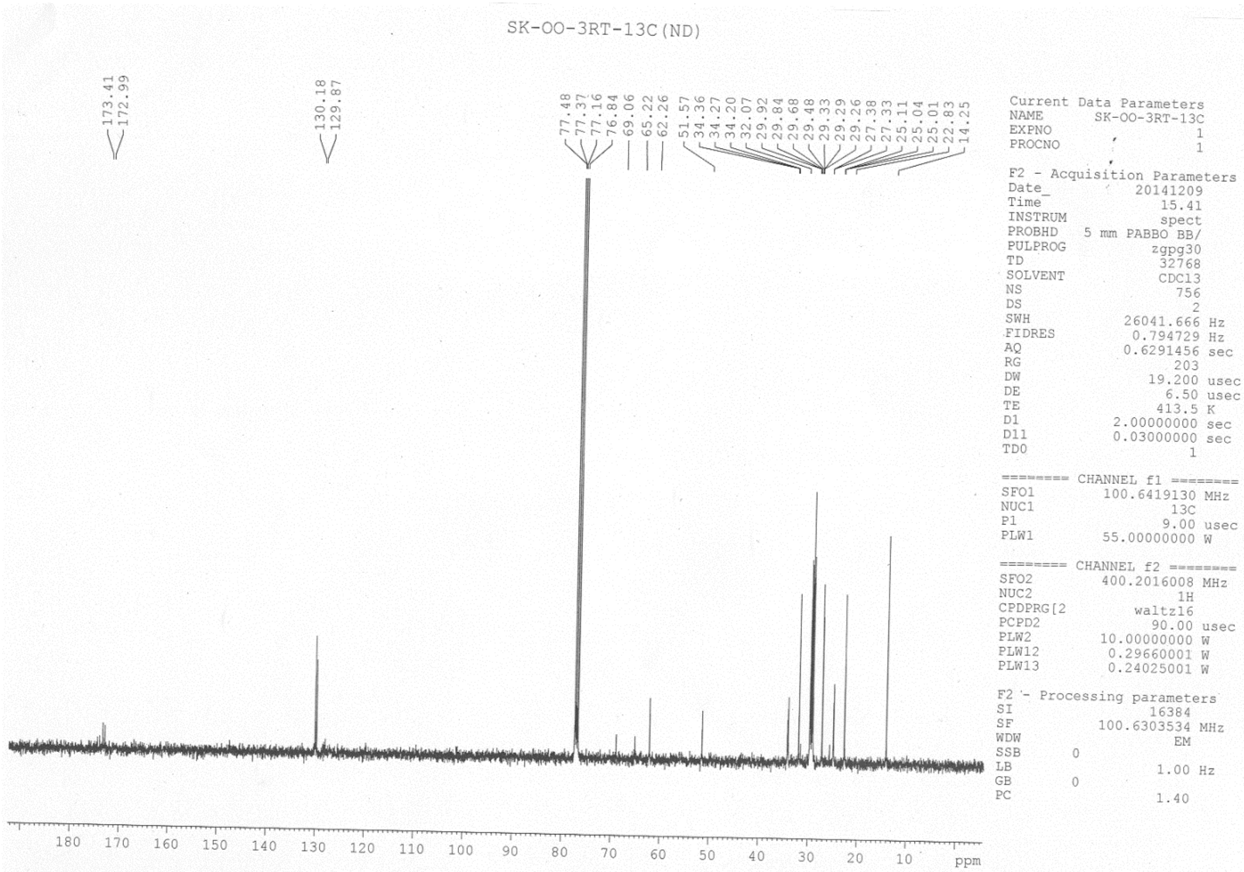
^{13}C NMR spectrum of transesterification of olive oil at 60°C over SPPOP-2



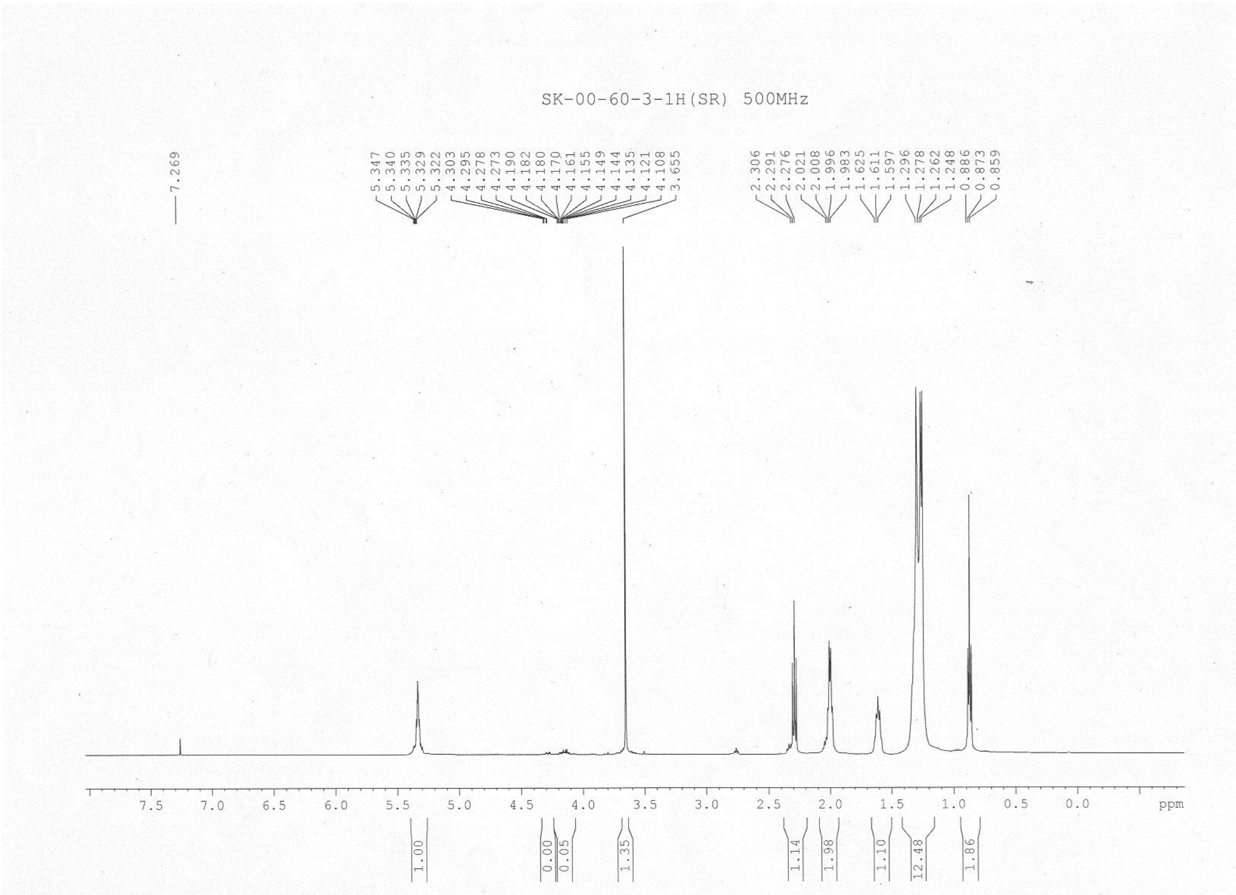
[1]H NMR spectrum of transesterification of olive oil at 25^{o}C over SPPOP-3



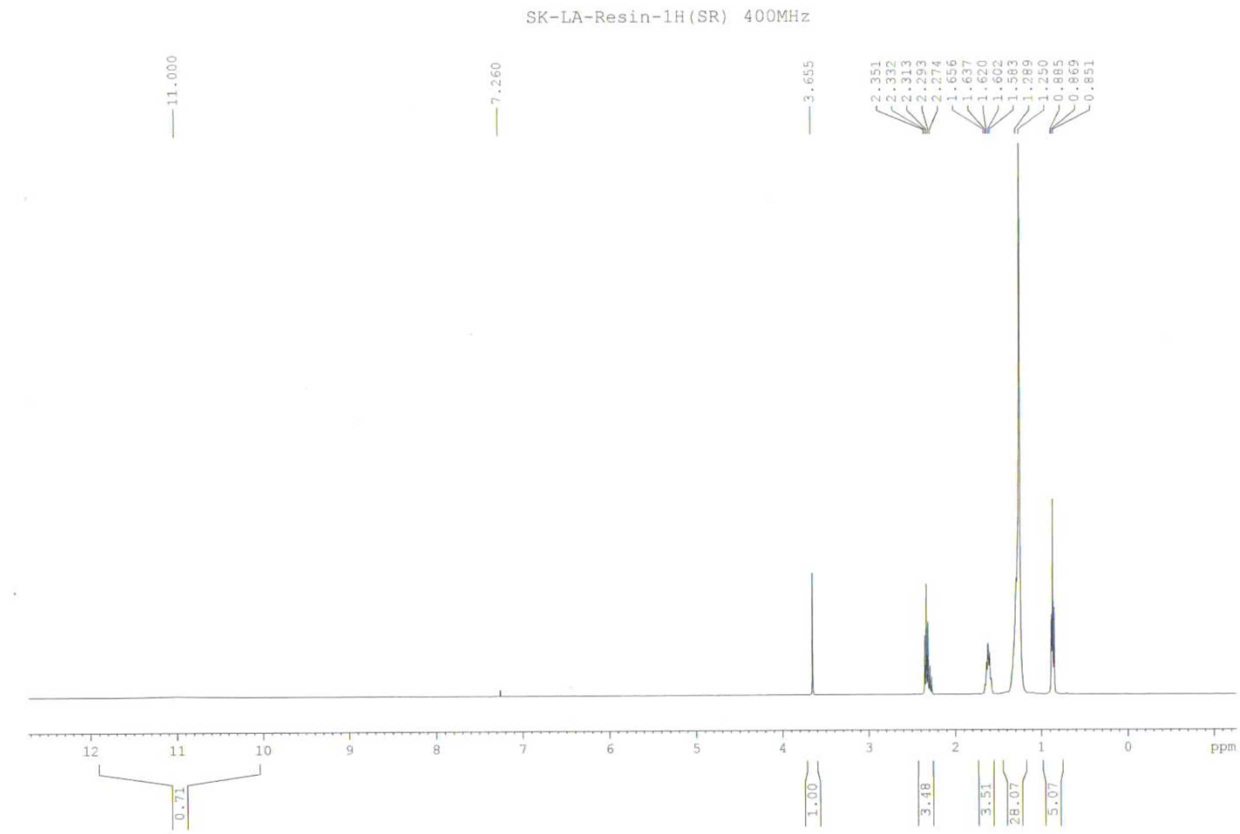
^{13}C NMR spectrum of transesterification of olive oil at 25°C over SPPOP-3



[1]H NMR spectrum of transesterification of olive oil at 60°C over SPPOP-3



^1H NMR spectrum of esterification of lauric acid at 25^oC over amberlite IR-120(H) resin



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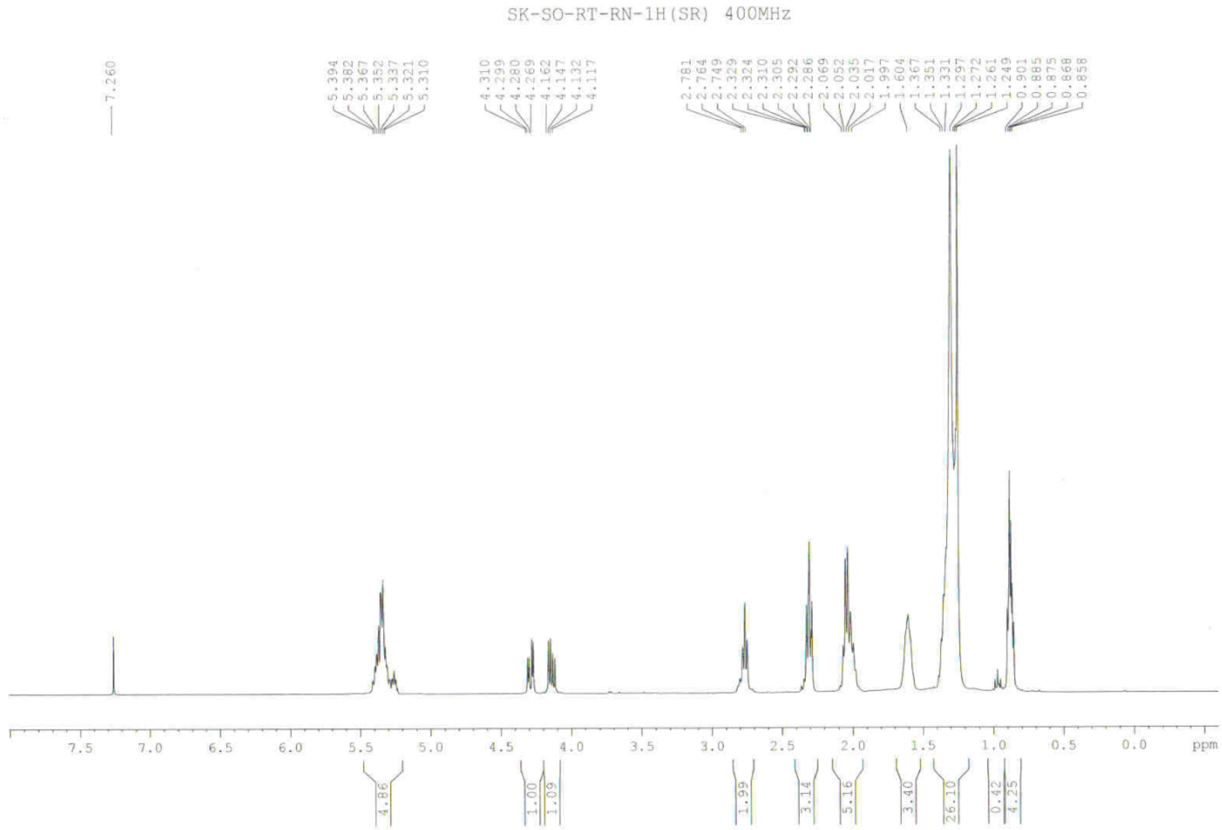

^{1}H NMR spectrum of transesterification of soybean oil at 60^{o}C over amberlite IR-120(H) resin