Hydrogenative Depolymerization of Polyesters Catalyzed by a PN^3-Ruthenium Complex Using Both H_2 and EtOH as Hydrogen Sources

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S1. The Manufacturer and Purity of Required Chemical Reagent

Table S1. The Manufacturer and Purity of Required Chemical Reagent.

Chemical	Purity	Manufacturer
1,4-Dioxane	99.7%	Adamas-beta
Toluene	99%	Xilong Chemical Co., Ltd
Tetrahydrofuran	99%	Xilong Chemical Co., Ltd
Anise ether	99%	Xilong Chemical Co., Ltd
Potassium t-butoxide	98%	InnoChem
Methanol	98%	Adamas-beta
Absolute ethanol	99.5%	Xilong Chemical Co., Ltd
Isopropanol	99%	InnoChem
PLA		InnoChem
PCL		InnoChem
PET		Shanghai Haohong Biomedical Technology Co., Ltd
PBS		Shanghai Haohong Biomedical Technology Co., Ltd
PBT		Shanghai Haohong Biomedical Technology Co., Ltd
PHA		Shanghai Haohong Biomedical Technology Co., Ltd
PE		Adamas-beta
PVC		Adamas-beta
PP		Adamas-beta
Tris(triphenylphosphine)ruthenium(II) chloride	99%	Laajoo

S2. NMR Spectra and The Yields of Hydrogenative Depolymerization of Polyesters

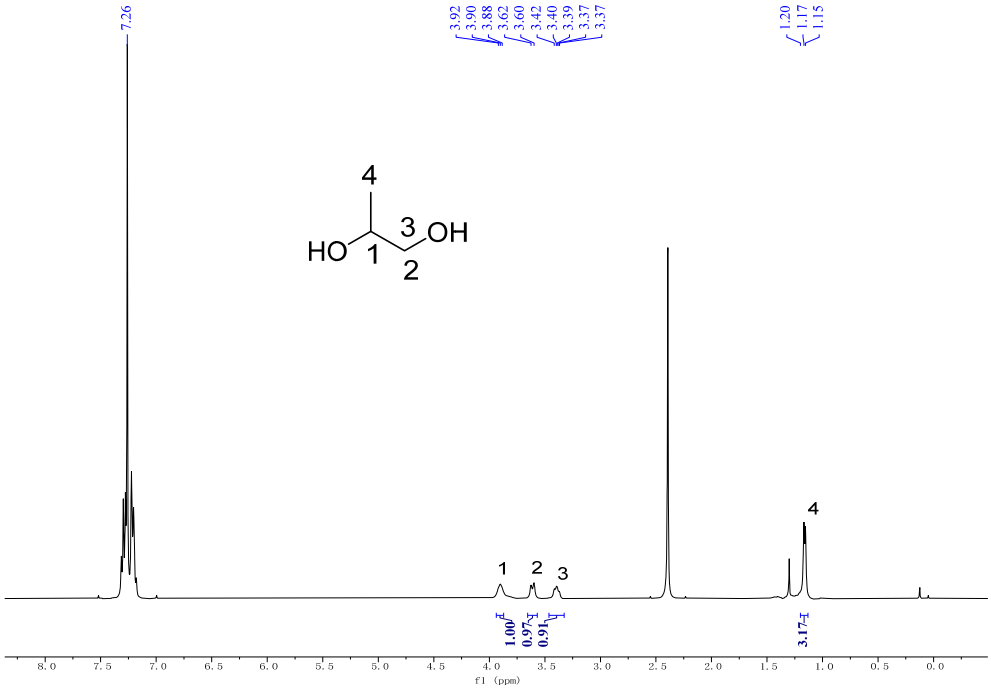

Figure S1. ^{1}H NMR spectrum ($CDCl_3$) of PLA depolymerization (Table 1, Entry11).

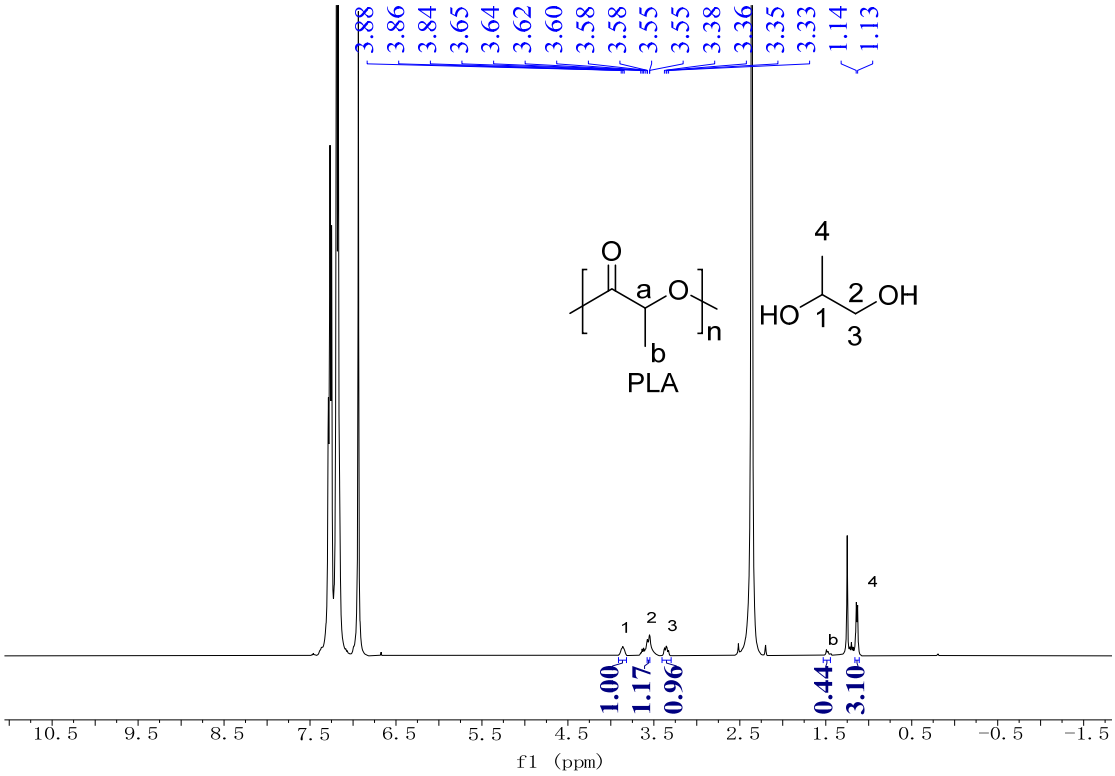

Figure S2. ^{1}H NMR spectrum ($CDCl_3$) of PLA depolymerization (Table 1, Entry12).

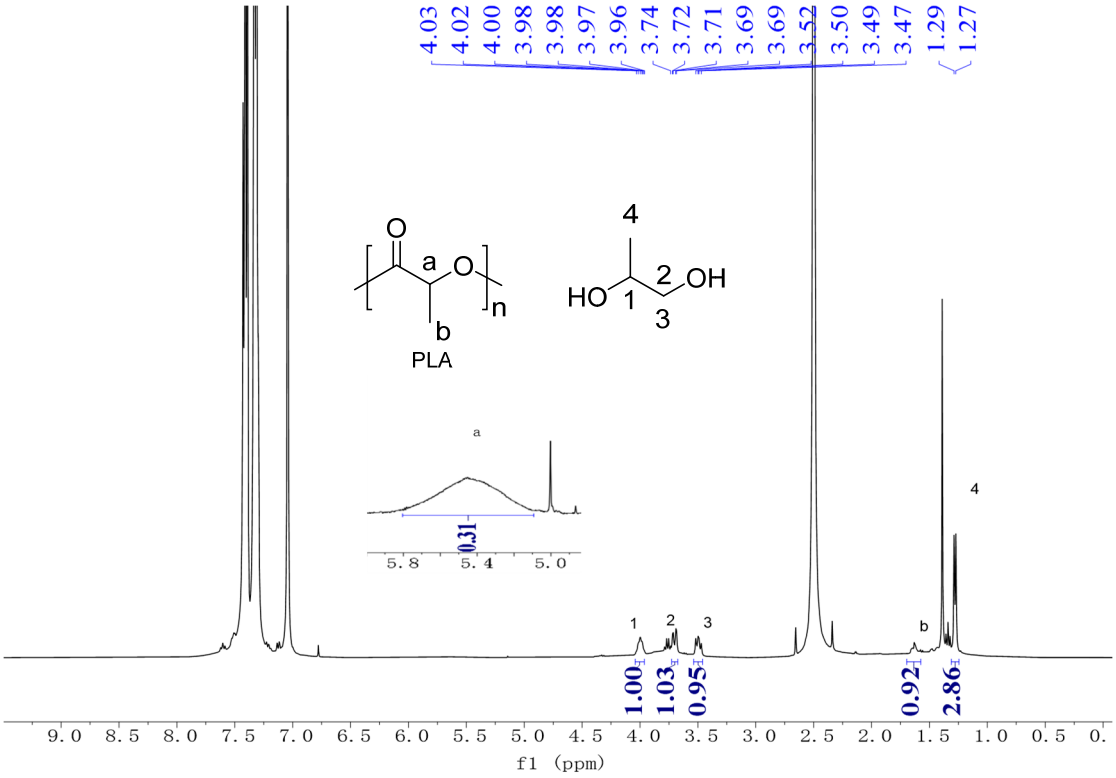

Figure S3. ^{1}H NMR spectrum ($CDCl_3$) of PLA depolymerization (Table 1, Entry13).

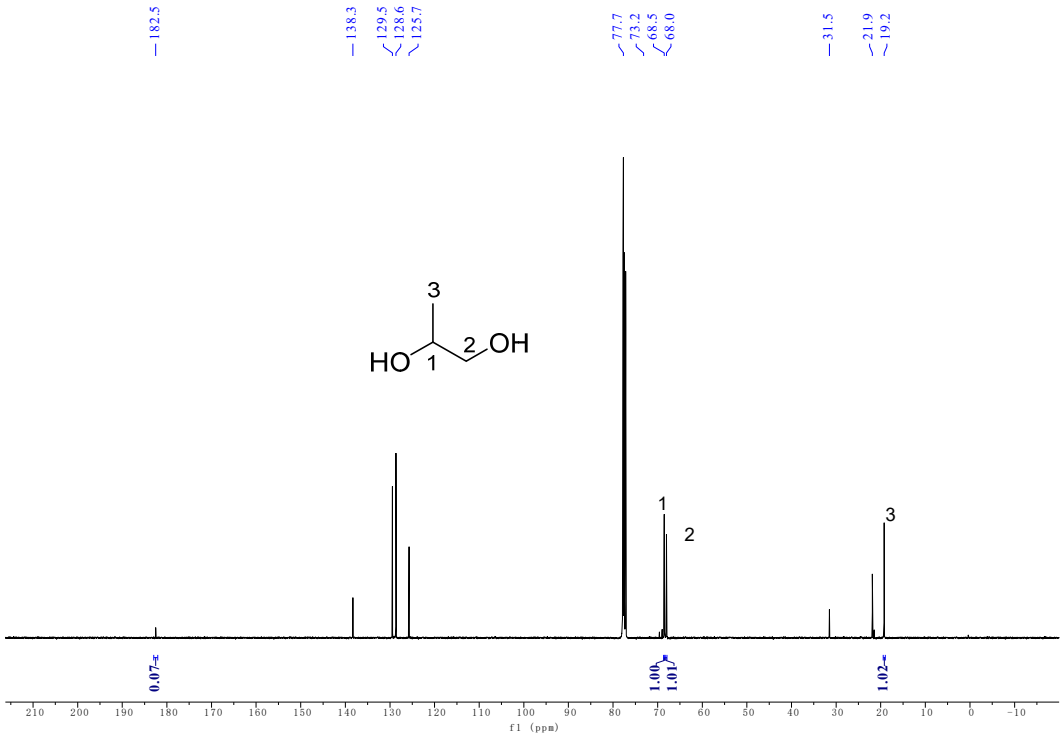

Figure S4. Quantitative ^{13}C NMR spectrum ($CDCl_3$) of PLA depolymerization (Table 1, Entry 15).

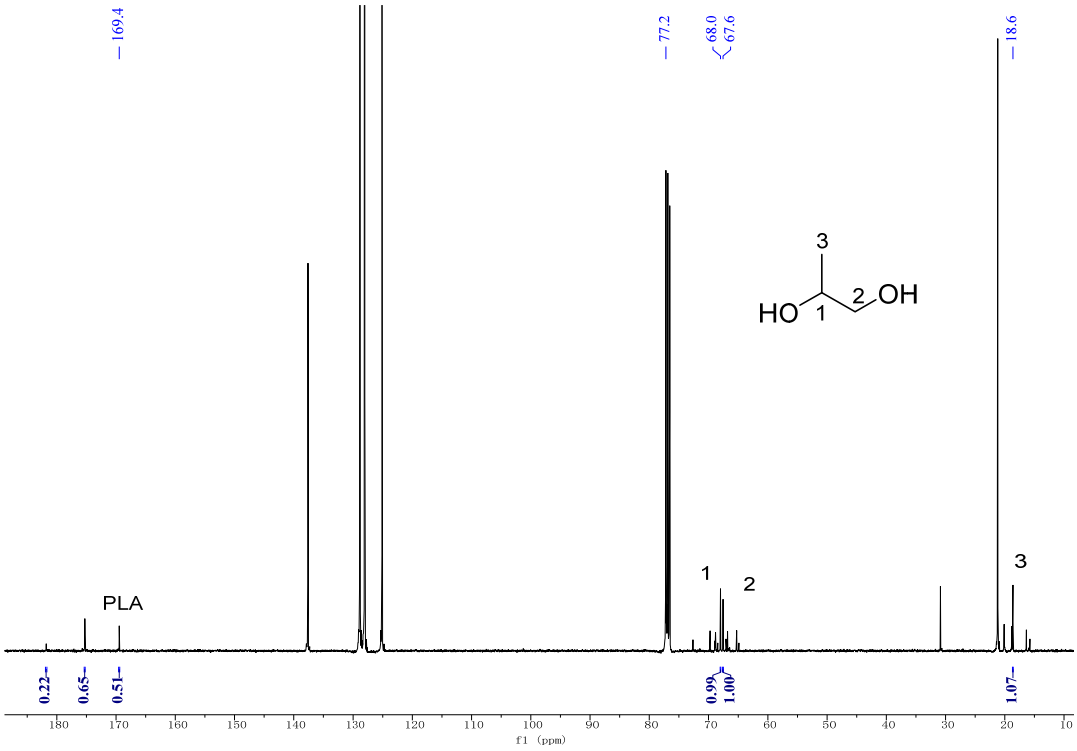

Figure S5. Quantitative ^{13}C NMR spectrum ($CDCl_3$) of PLA depolymerization (Table 1, Entry 16).

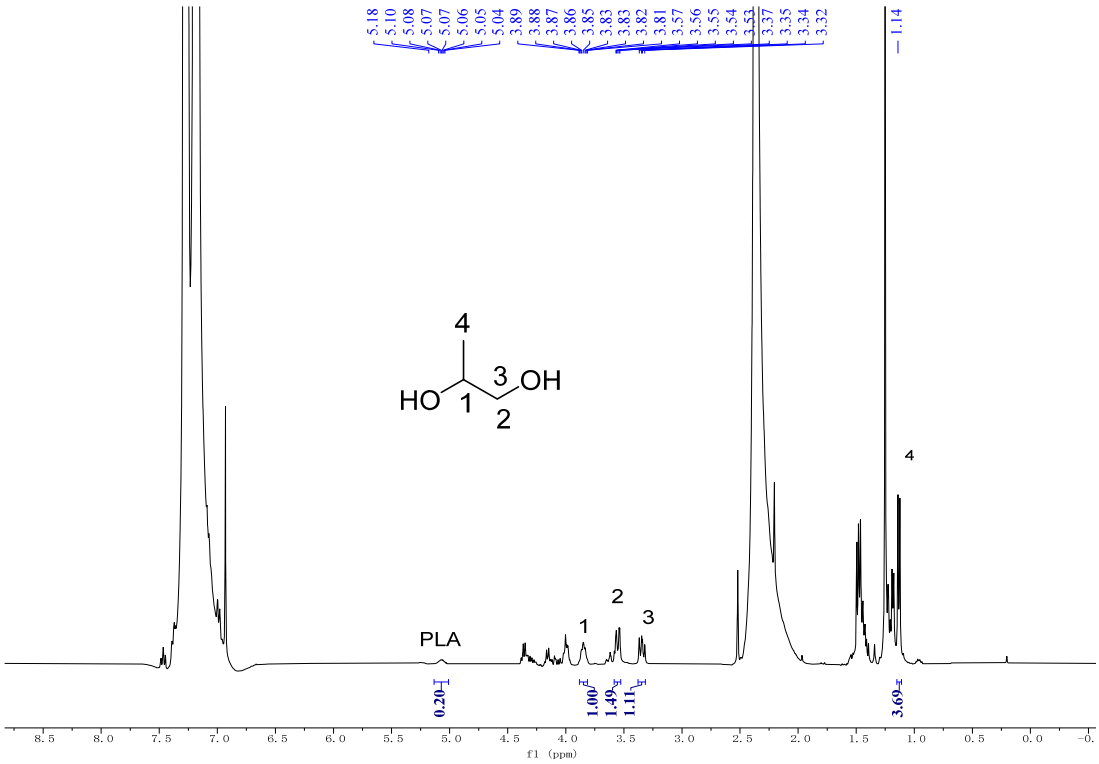

Figure S6. ^{1}H NMR spectrum ($CDCl_3$) of PLA depolymerization (Table 1, Entry 17).

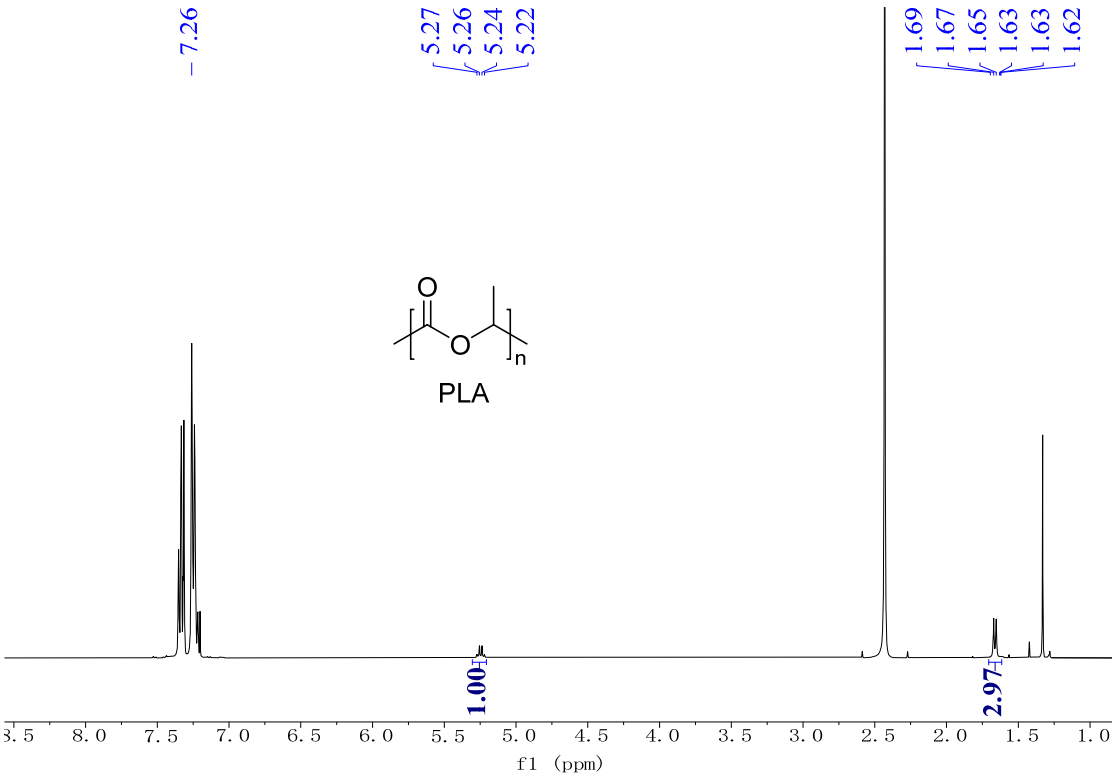

Figure S7. ^{1}H NMR spectrum ($CDCl_3$) of PLA depolymerization (Table 1, Entry 18).

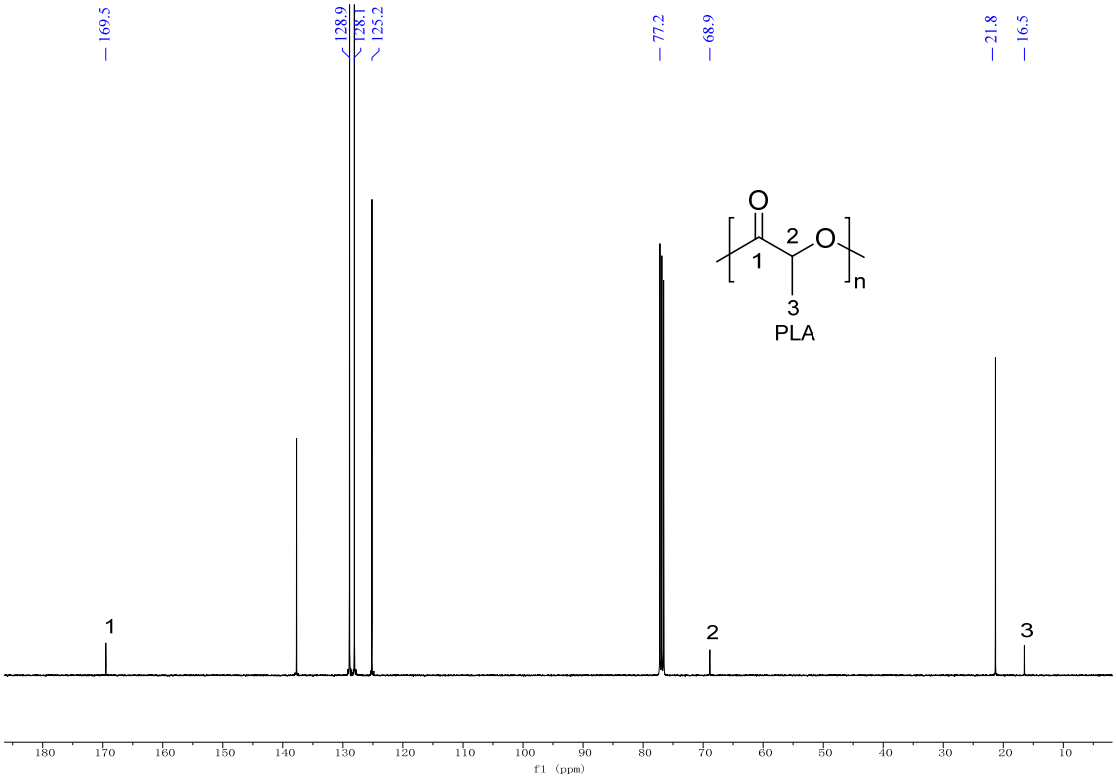

Figure S8. Quantitative ^{13}C NMR spectrum ($CDCl_3$, 25 °C) of PLA depolymerization. (Table 1, Entry 19)

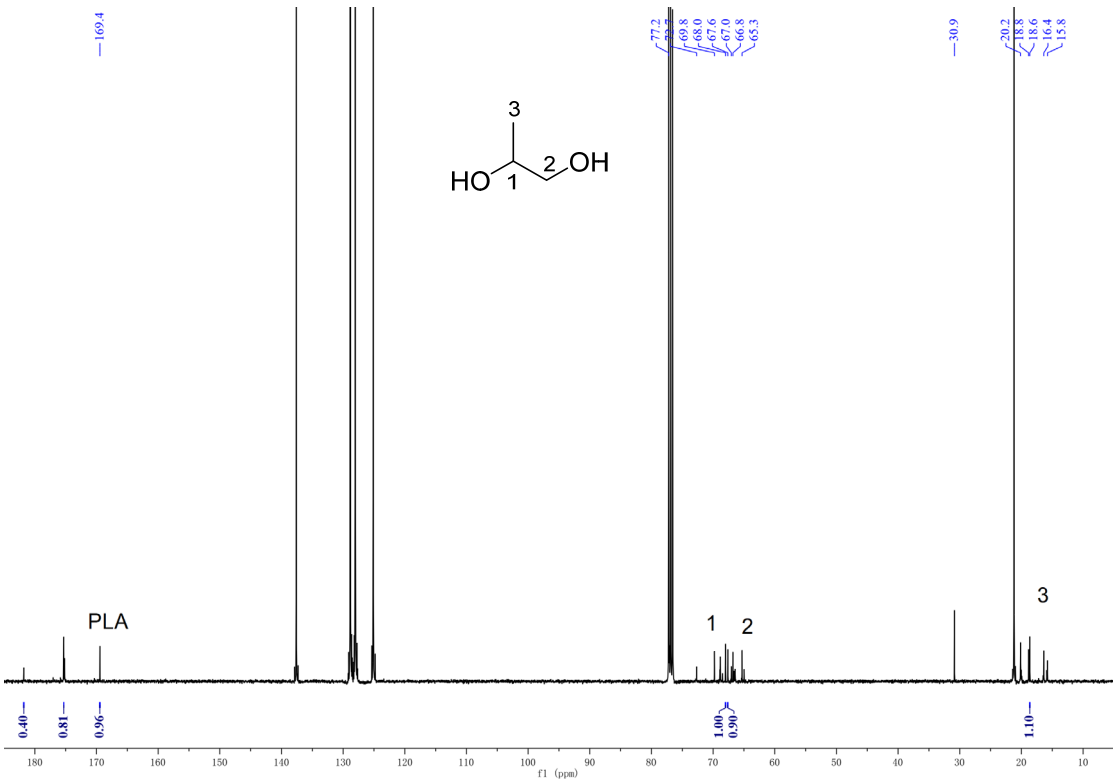

Figure S9. Quantitative ^{13}C NMR spectrum ($CDCl_3$) of PLA depolymerization (Table 1, Entry 20).

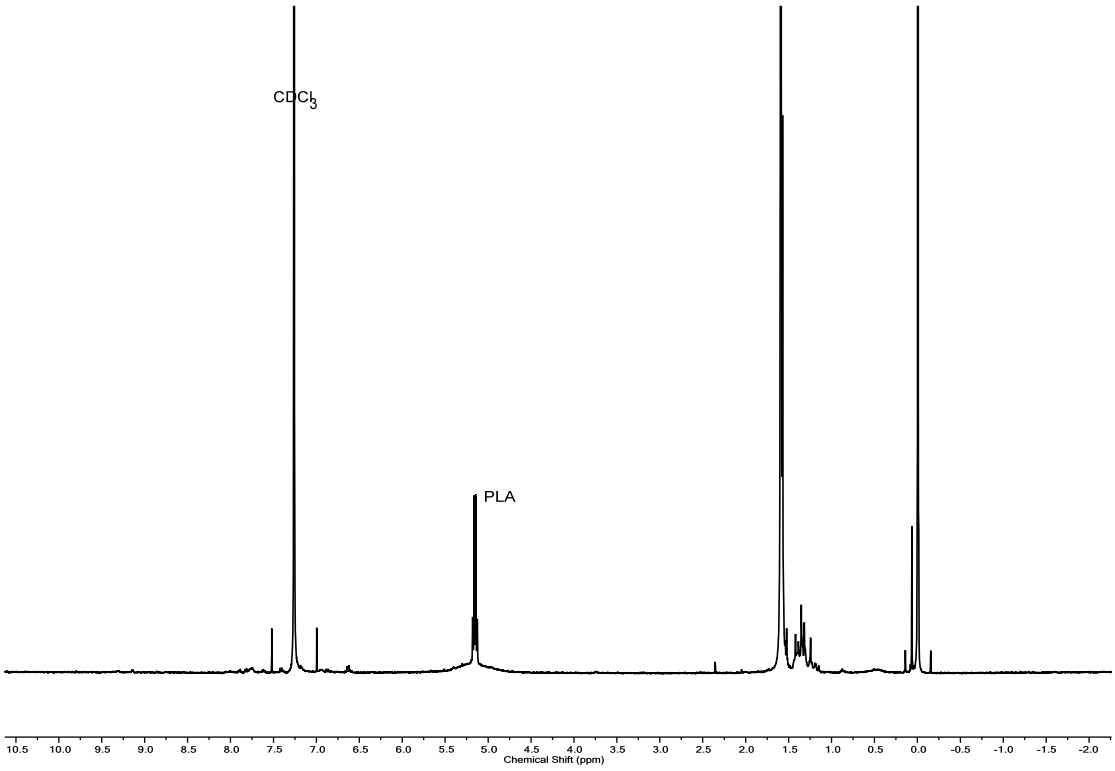

Figure S10. ^{1}H NMR spectrum ($CDCl_3$) of PLA depolymerization (Table 1, Entry 21).

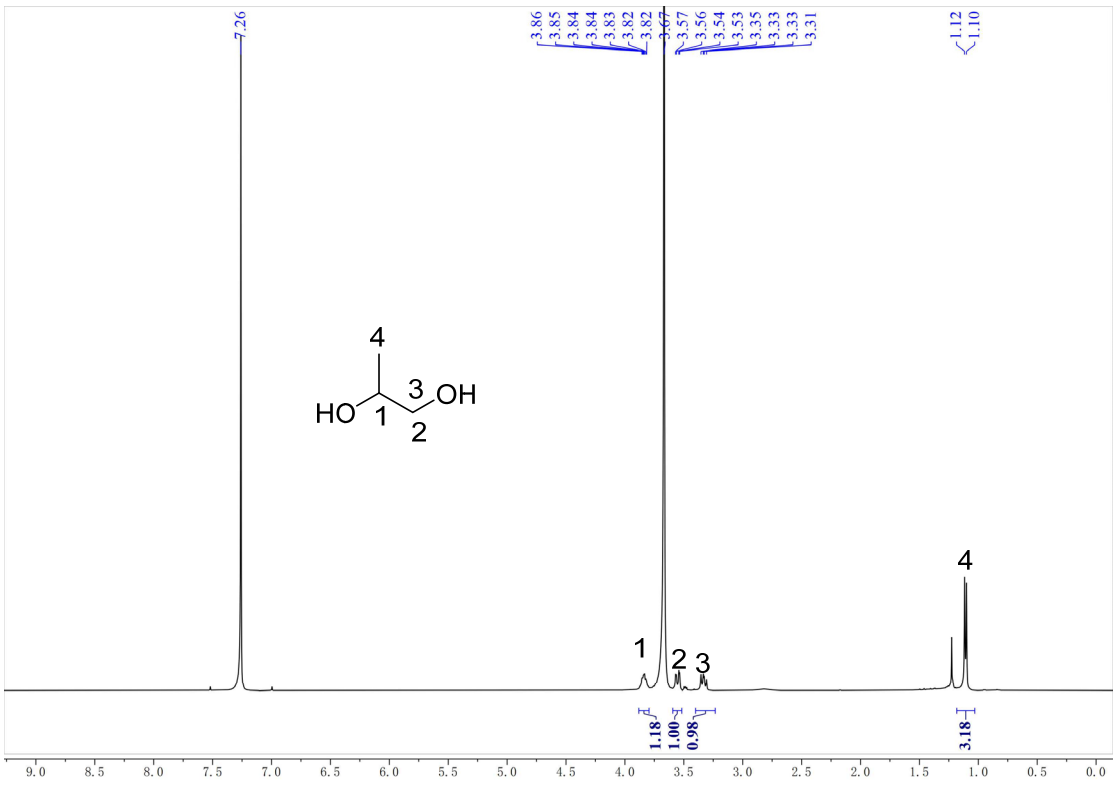

Figure S11. ^{1}H NMR spectrum ($CDCl_3$) of PLA depolymerization (Table 1, Entry 22).

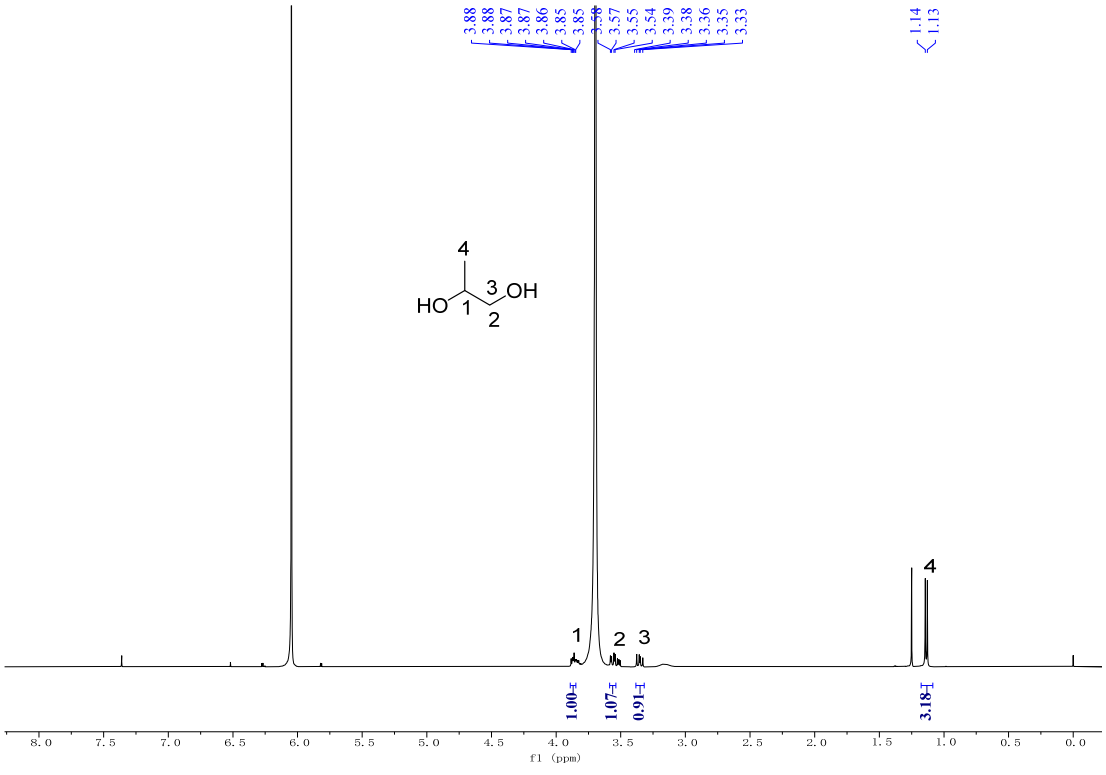

Figure S12. ^{1}H NMR spectrum ($CDCl_3$) of PLA depolymerization (Table 1, Entry 23).

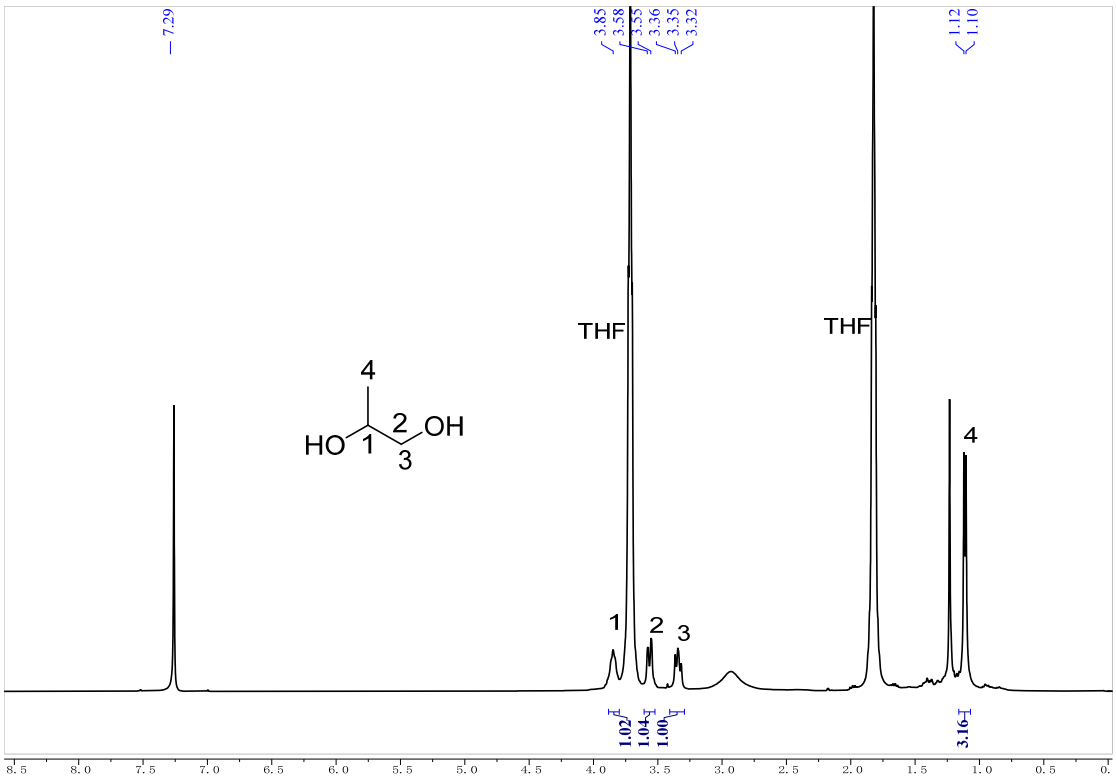

Figure S13. ^{1}H NMR spectrum ($CDCl_3$) of PLA depolymerization (Table 1, Entry 24).

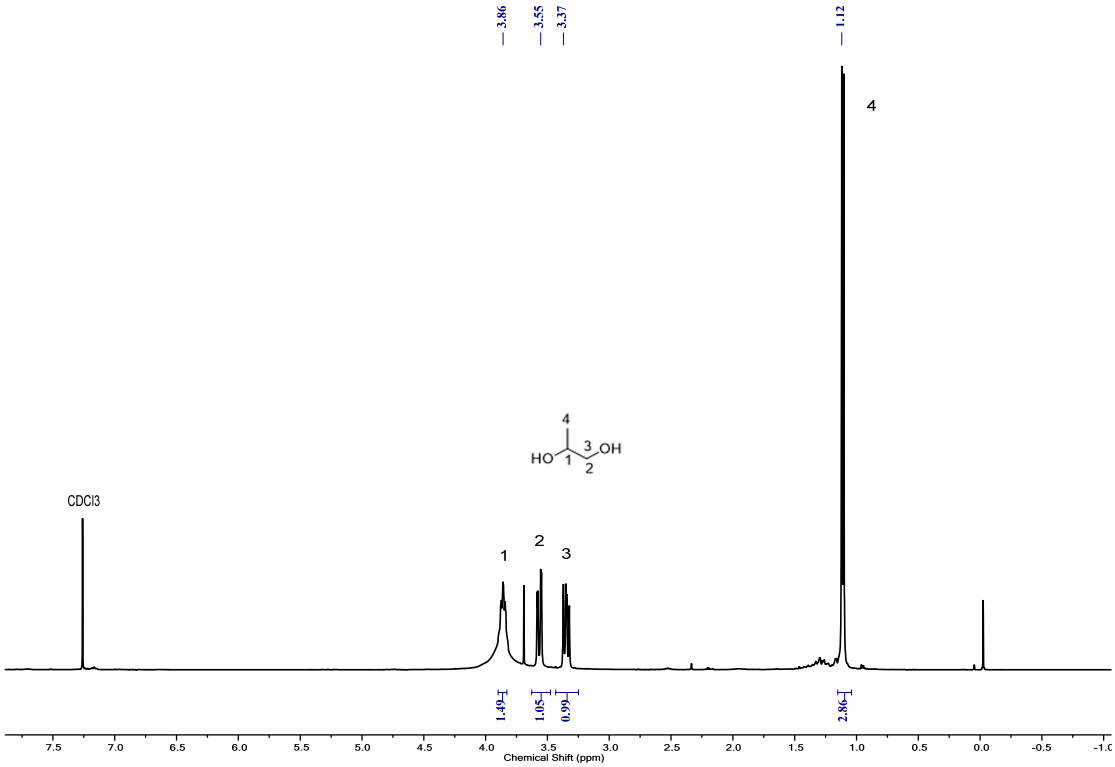

Figure S14. ^{1}H NMR spectrum ($CDCl_3$) of PLA depolymerization (Table 1, Entry 25).

Figure S15. ^{1}H NMR spectrum ($CDCl_3$) of PCL depolymerization (Table 2, Entry 1).

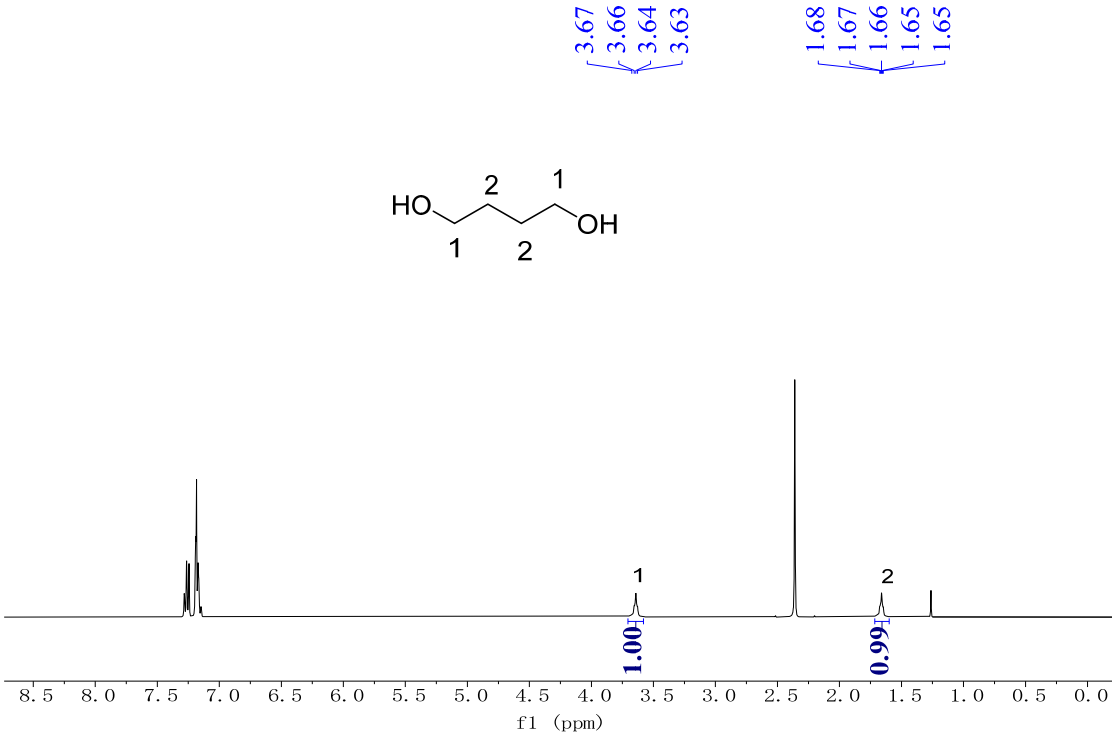

Figure S16. ^{1}H NMR spectrum ($CDCl_3$) of PBS depolymerization (Table 2, Entry 2).

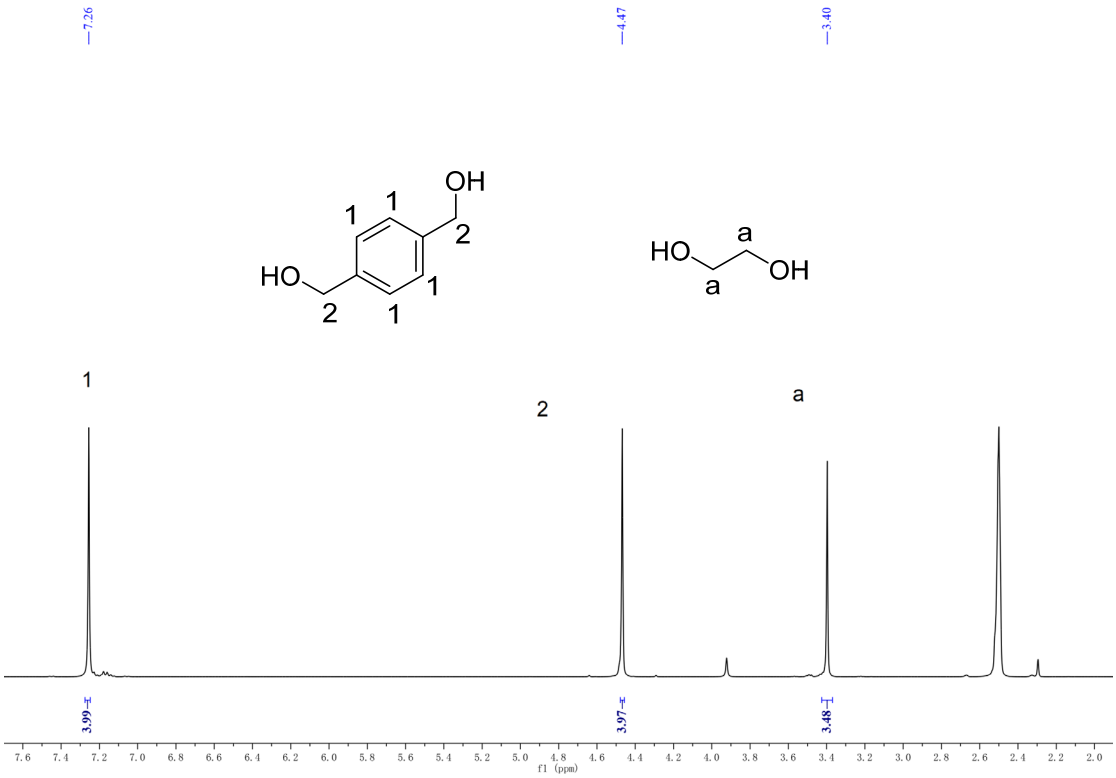

Figure S17. ^{1}H NMR spectrum ($CDCl_3$) of PET depolymerization (Table 2, Entry 3).

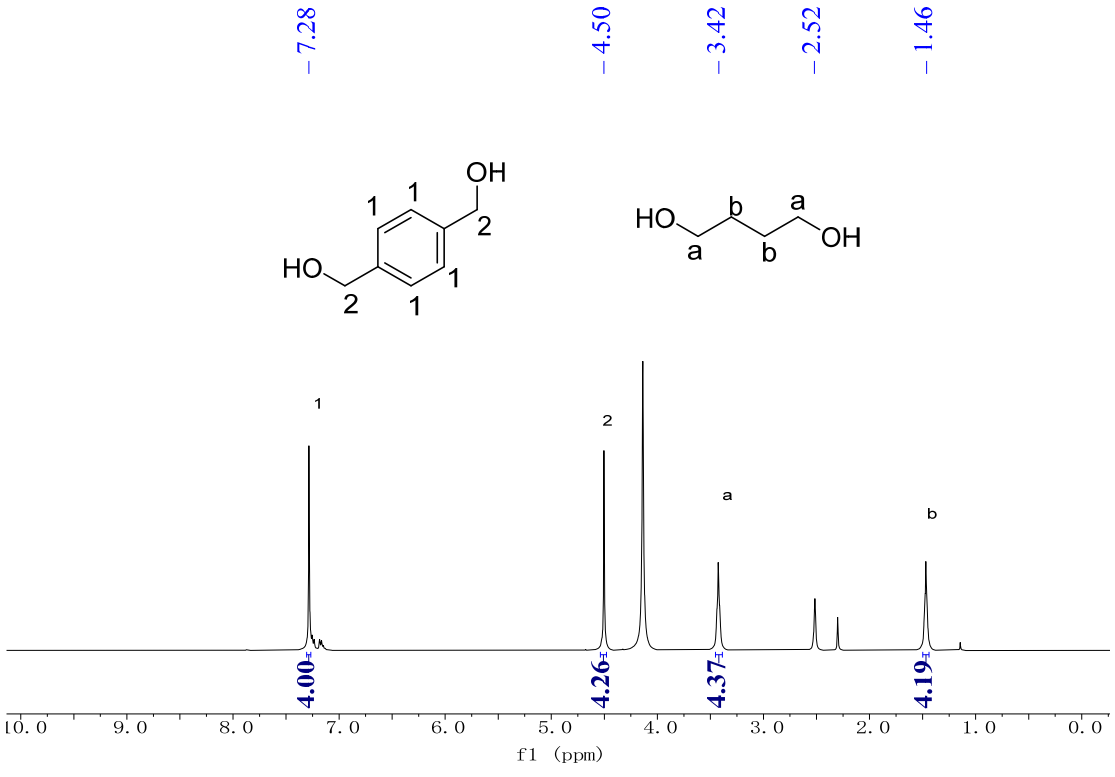

Figure S18. ^{1}H NMR spectrum ($CDCl_3$) of PBT depolymerization (Table 2, Entry 4).

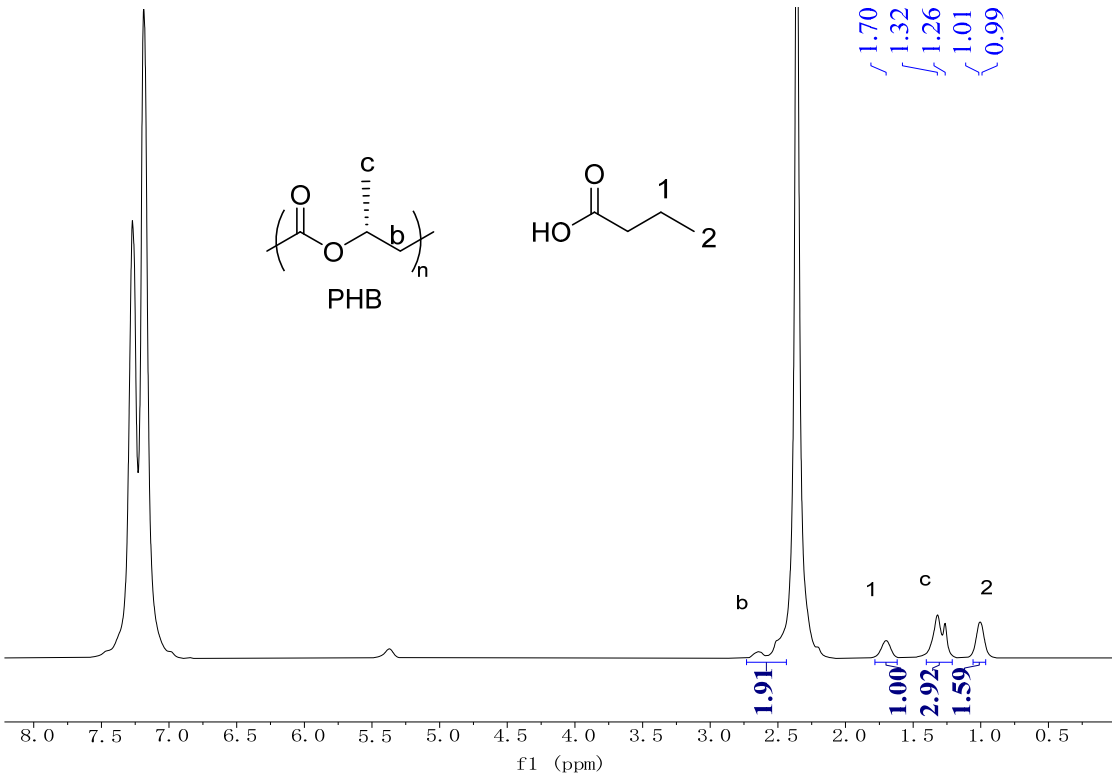

Figure S19. ^{1}H NMR spectrum ($CDCl_3$) of PHB depolymerization (Table 2, Entry 5).

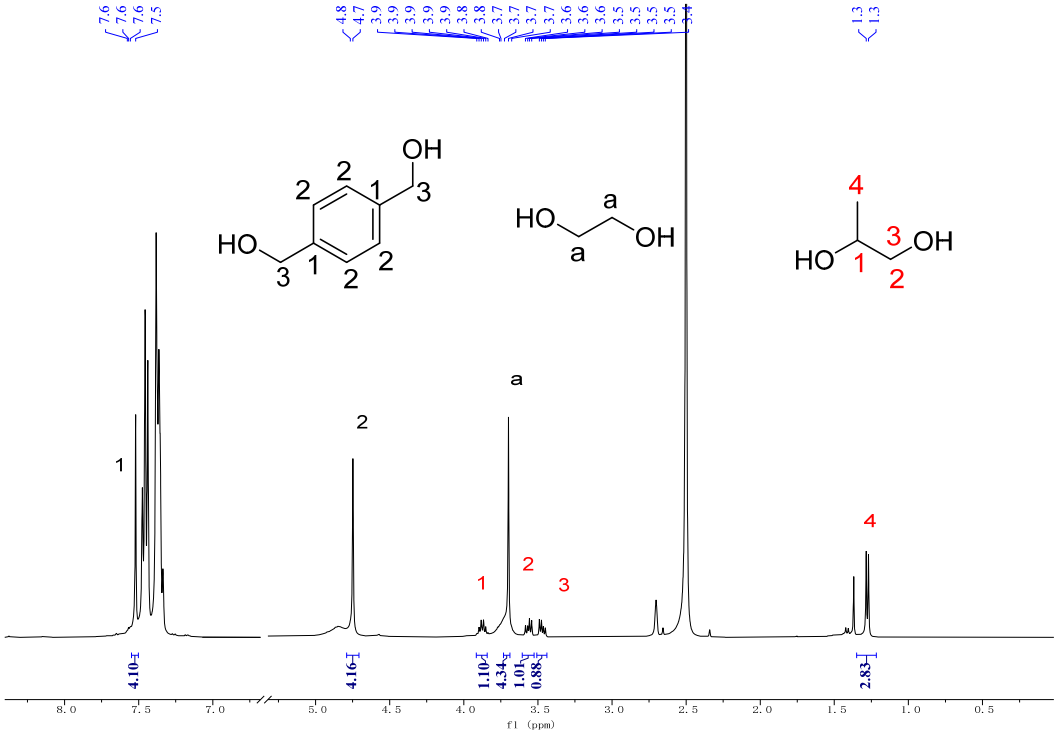

Figure S20. ^{1}H NMR spectrum ($CDCl_3$) of PLA, PET depolymerization (Table 2, Entry 8).

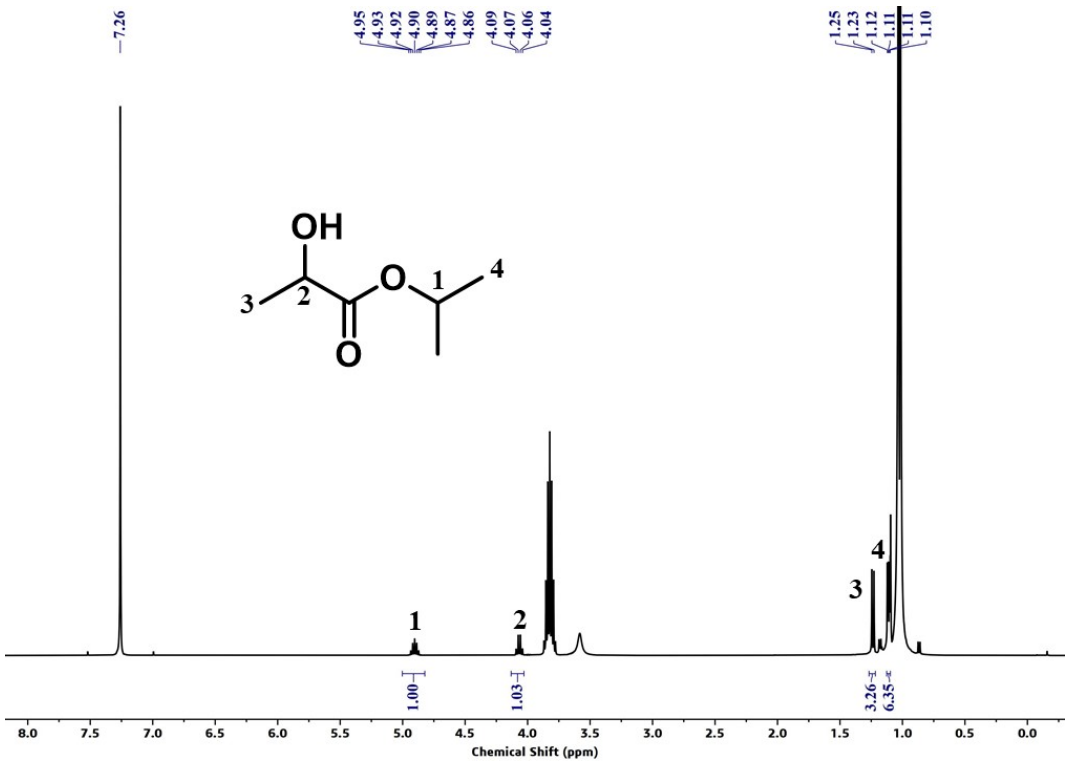

Figure S21. ^{1}H NMR spectrum ($CDCl_3$) (Table 3, Entry 1).

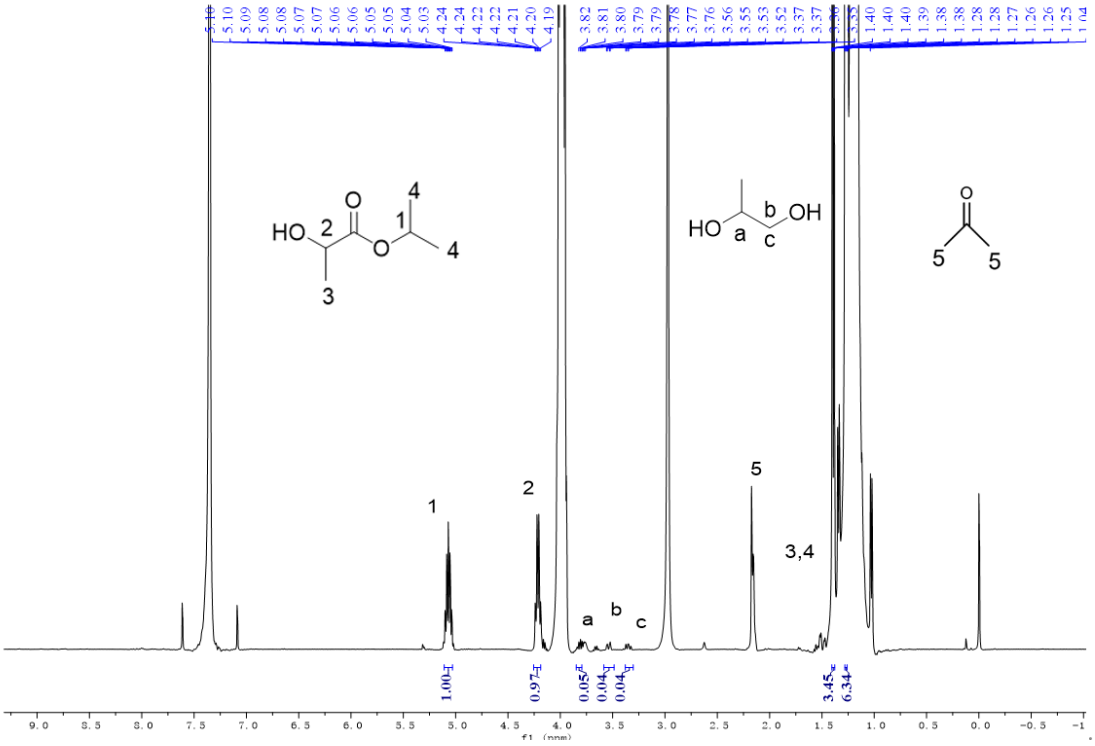

Figure S22. ^{1}H NMR spectrum ($CDCl_3$) (Table 3, Entry 2).

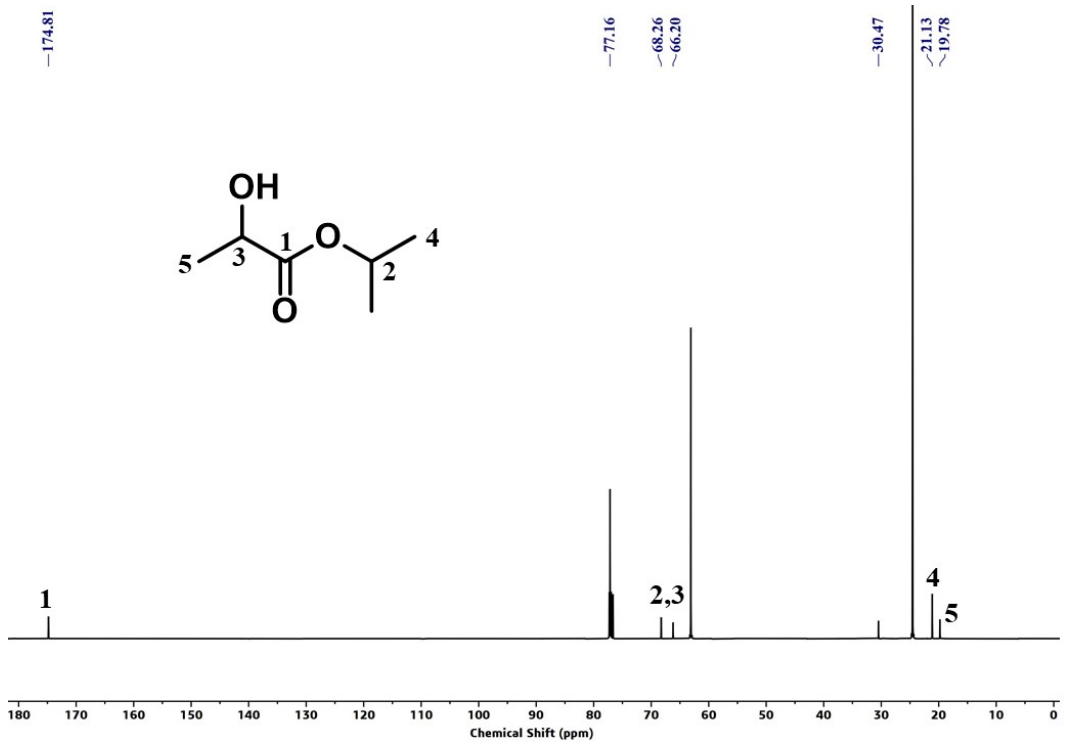

Figure S23. Quantitative ^{13}C NMR spectrum ($CDCl_3$) (Table 3, Entry 2).

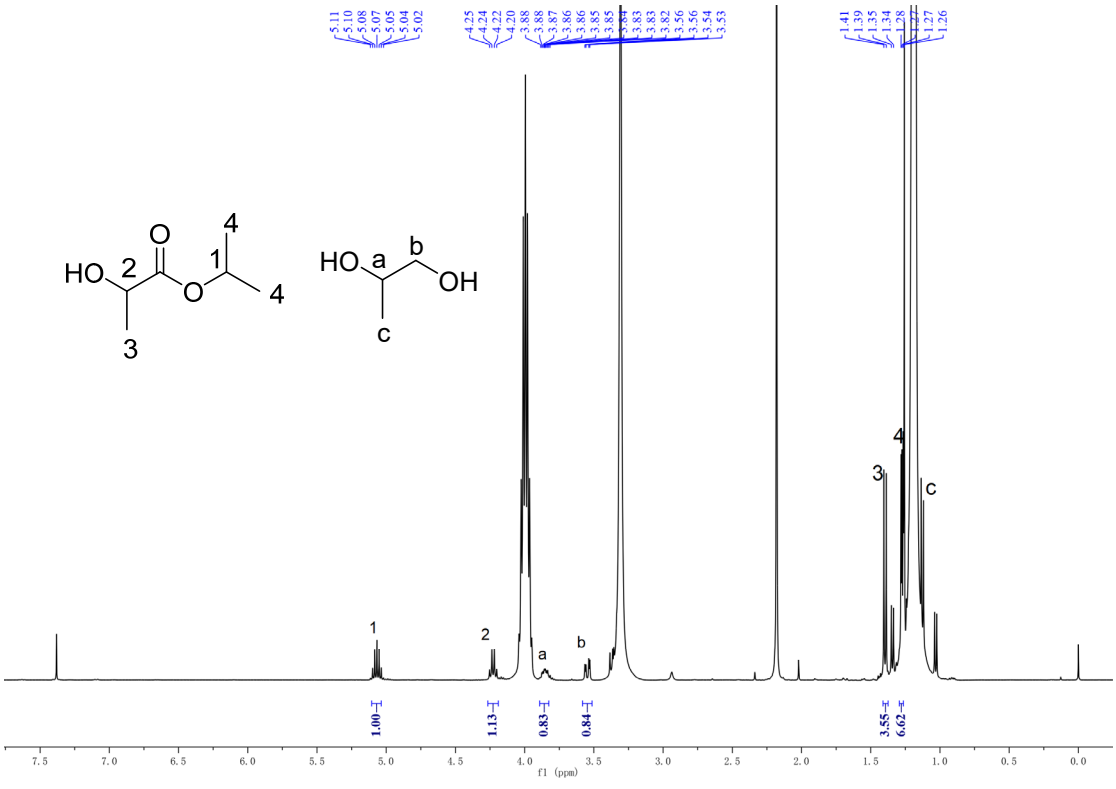

Figure S24. ^{1}H NMR spectrum ($CDCl_3$) (Table 3, Entry 3).

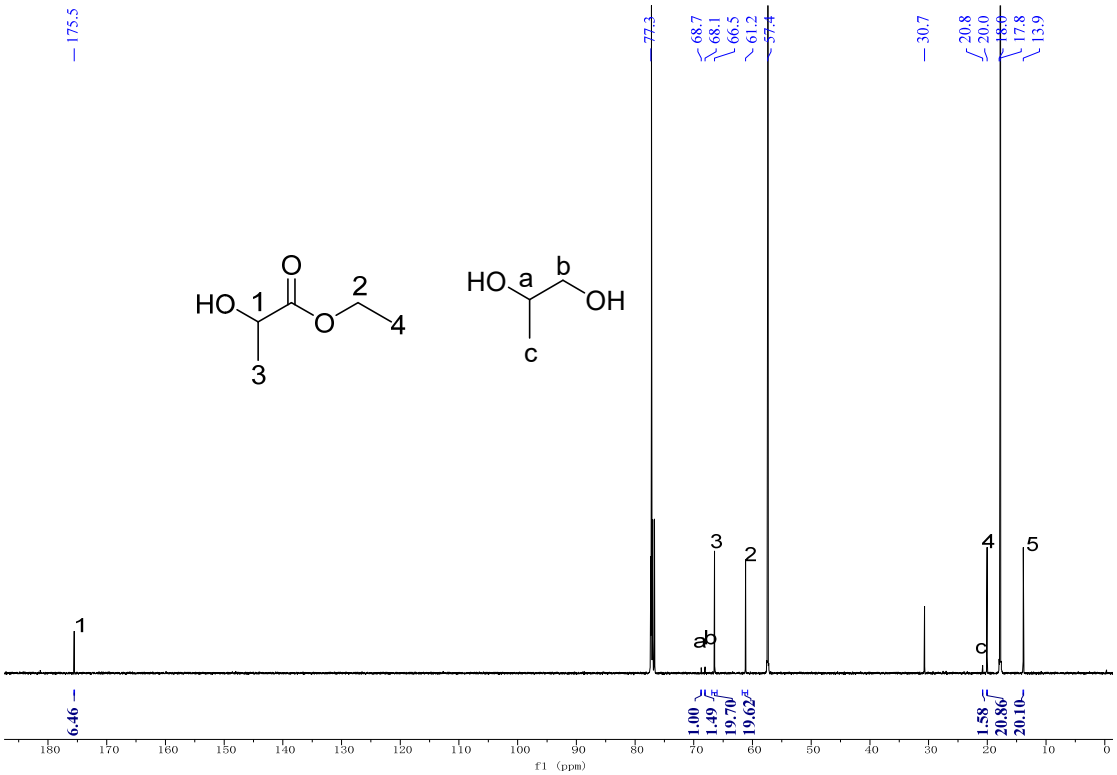

Figure S25. Quantitative ^{13}C NMR spectrum ($CDCl_3$, 25 °C). (Table 3, Entry 4)

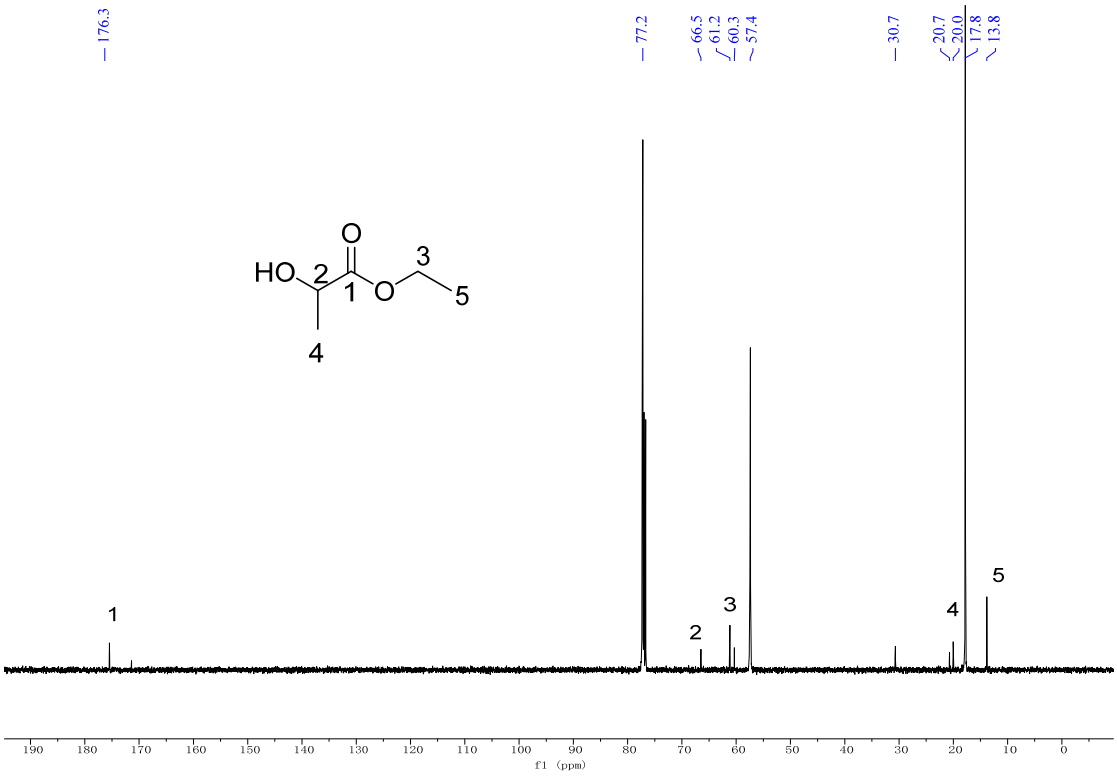

Figure S26. Quantitative ^{13}C NMR spectrum ($CDCl_3$, 25 °C). (Table 3, Entry 5)

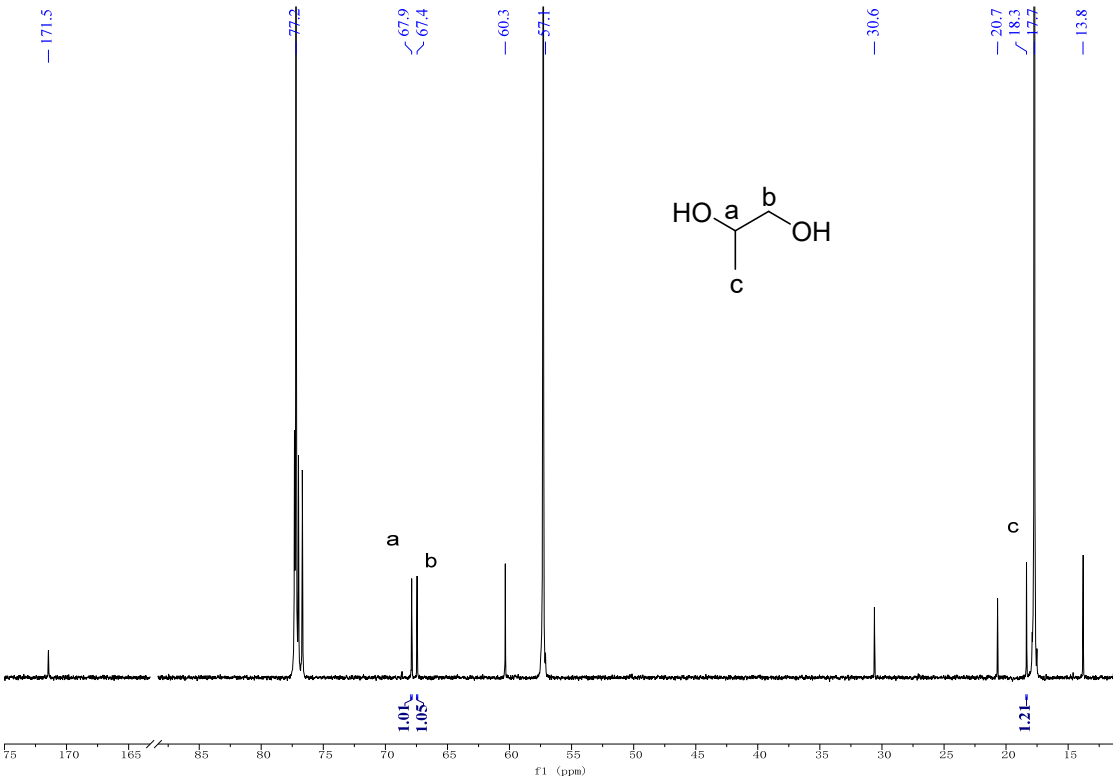

Figure S27. Quantitative ^{13}C NMR spectrum ($CDCl_3$) (Table 3, Entry 6).

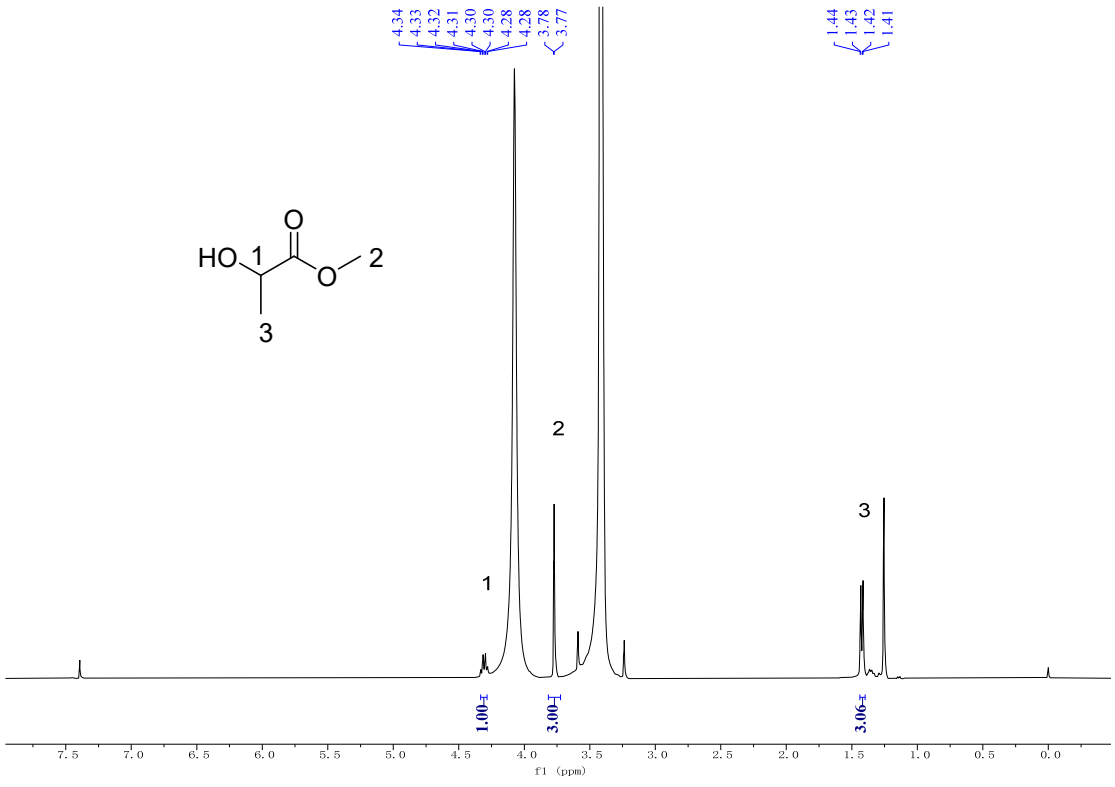

Figure S28. ^{1}H NMR spectrum ($CDCl_3$) (Table 3, Entry 7)

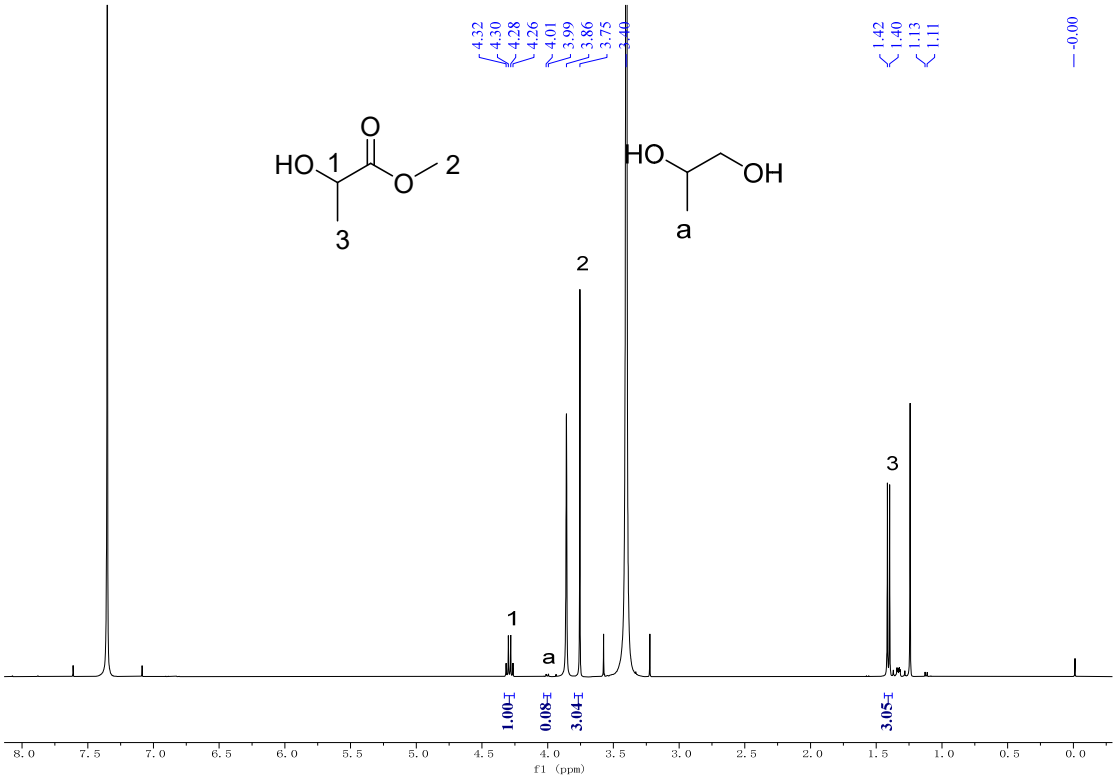

Figure S29. ^{1}H NMR spectrum ($CDCl_3$) (Table 3, Entry 8).

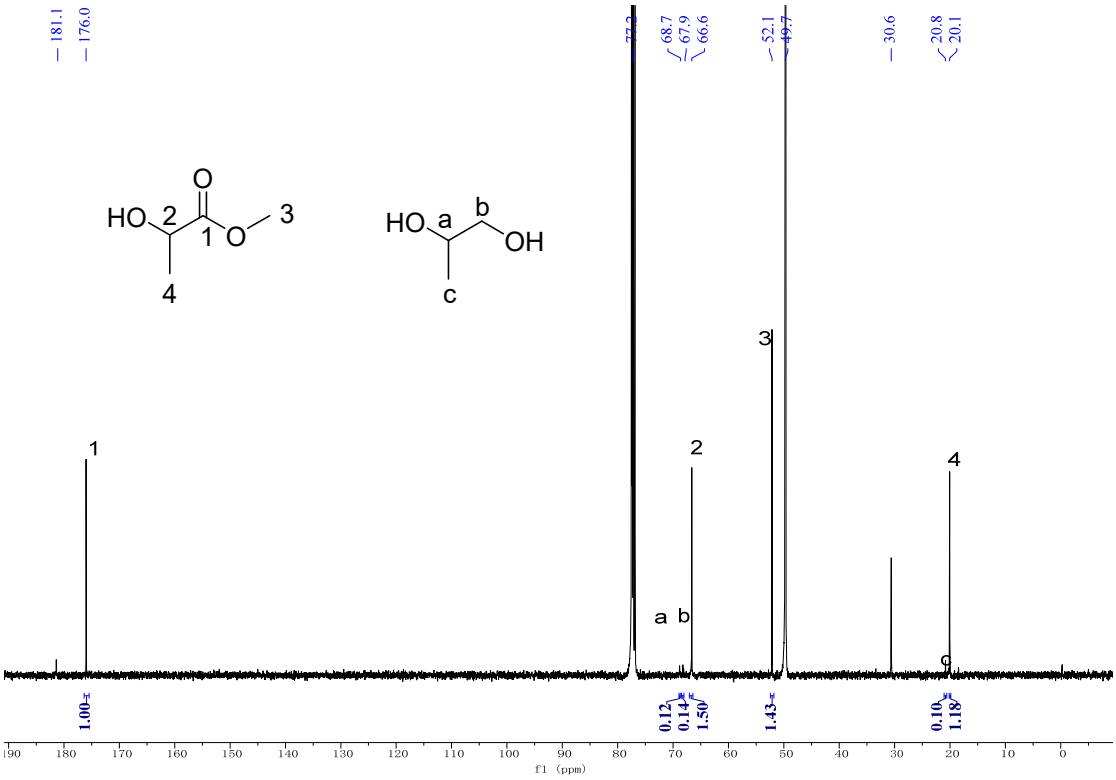

Figure S30. Quantitative ^{13}C NMR spectrum ($CDCl_3$) (Table 3, Entry 9).

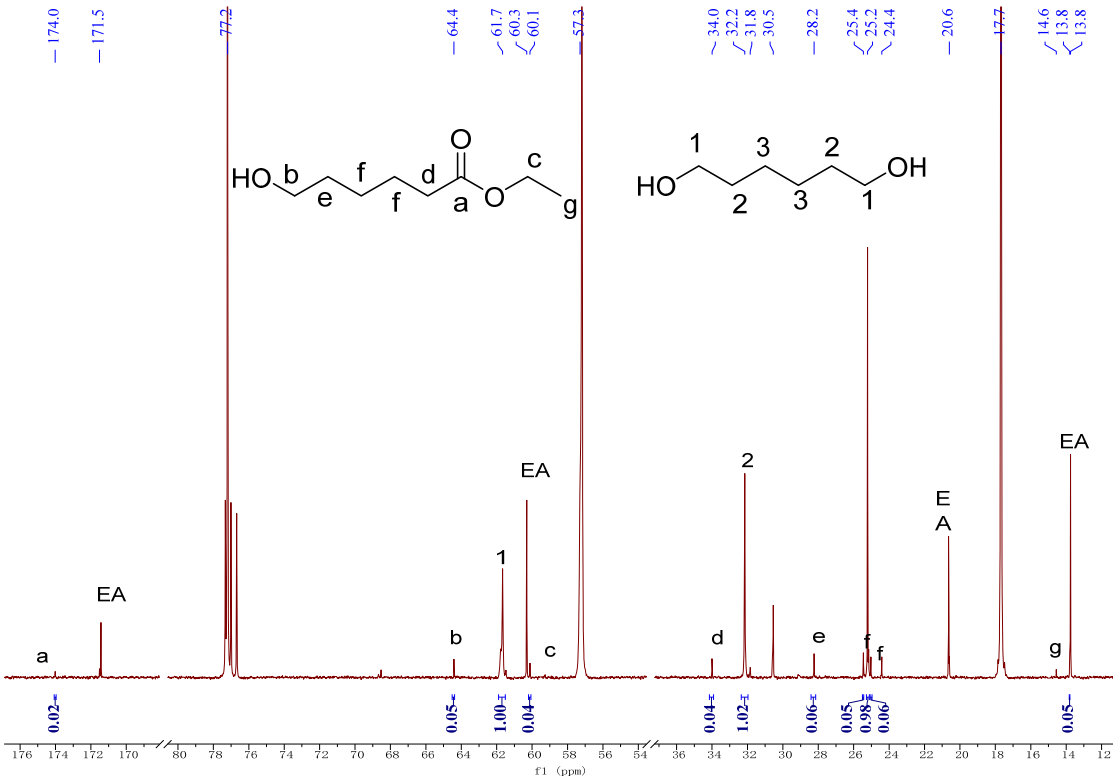

Figure S31. Quantitative ^{13}C NMR spectrum ($CDCl_3$) (Table 3, Entry 10).

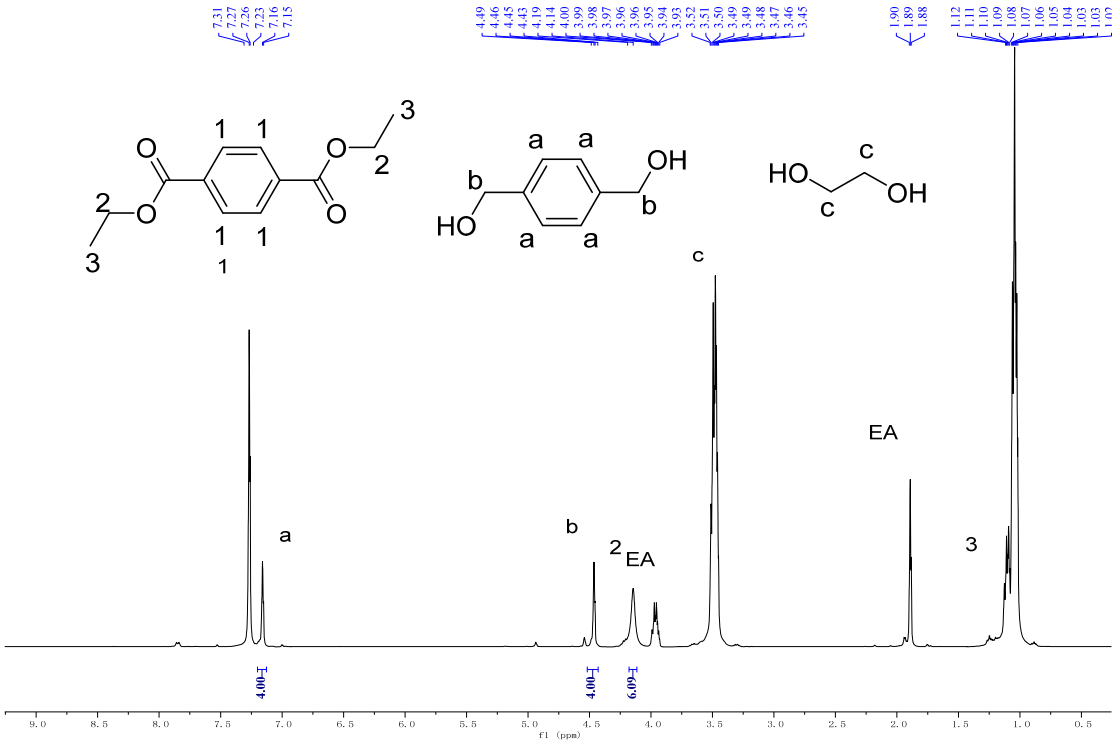

Figure S32. ^{1}H NMR spectrum ($CDCl_3$) (Table 3, Entry 12).

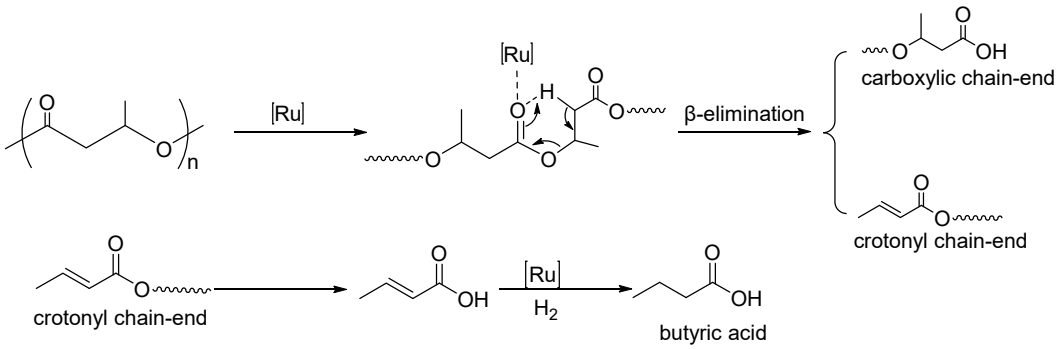

Figure S33. The possible pathway for converting PHB to butyric acid through Ru catalyst under H_2.