

Electronic Supplementary Information

Facile method based on ^{19}F -NMR for the determination of hydroxyl value and molecular weight of hydroxyl terminated polymers

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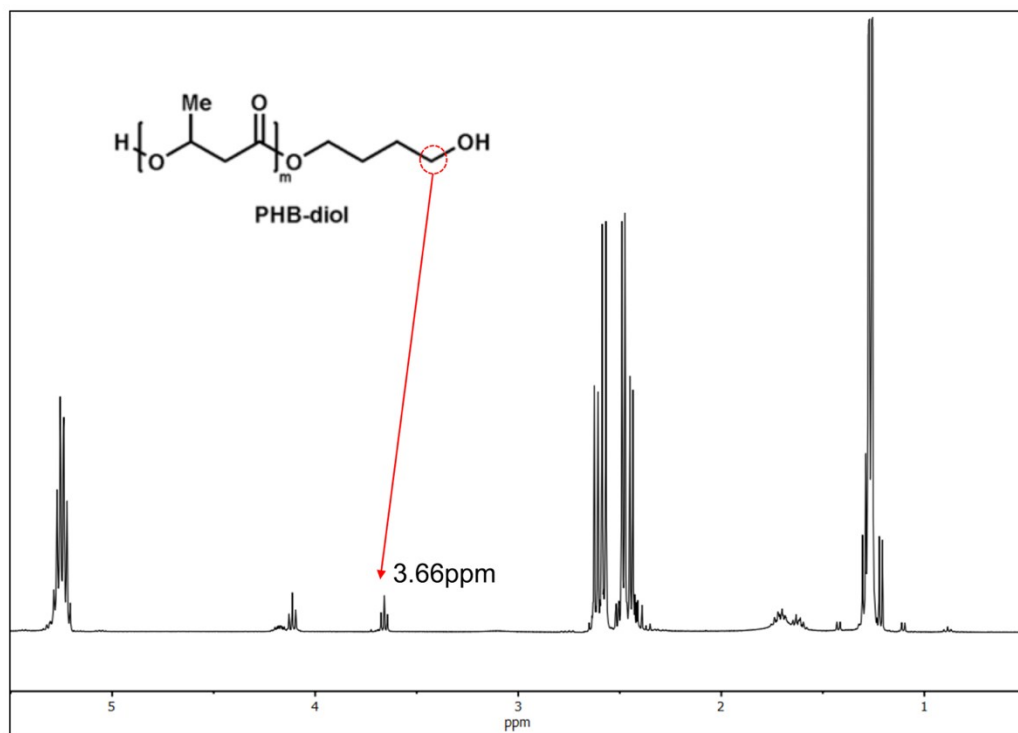


Figure S1. Representative ¹H-NMR spectrum for the synthesized PHB-diols.

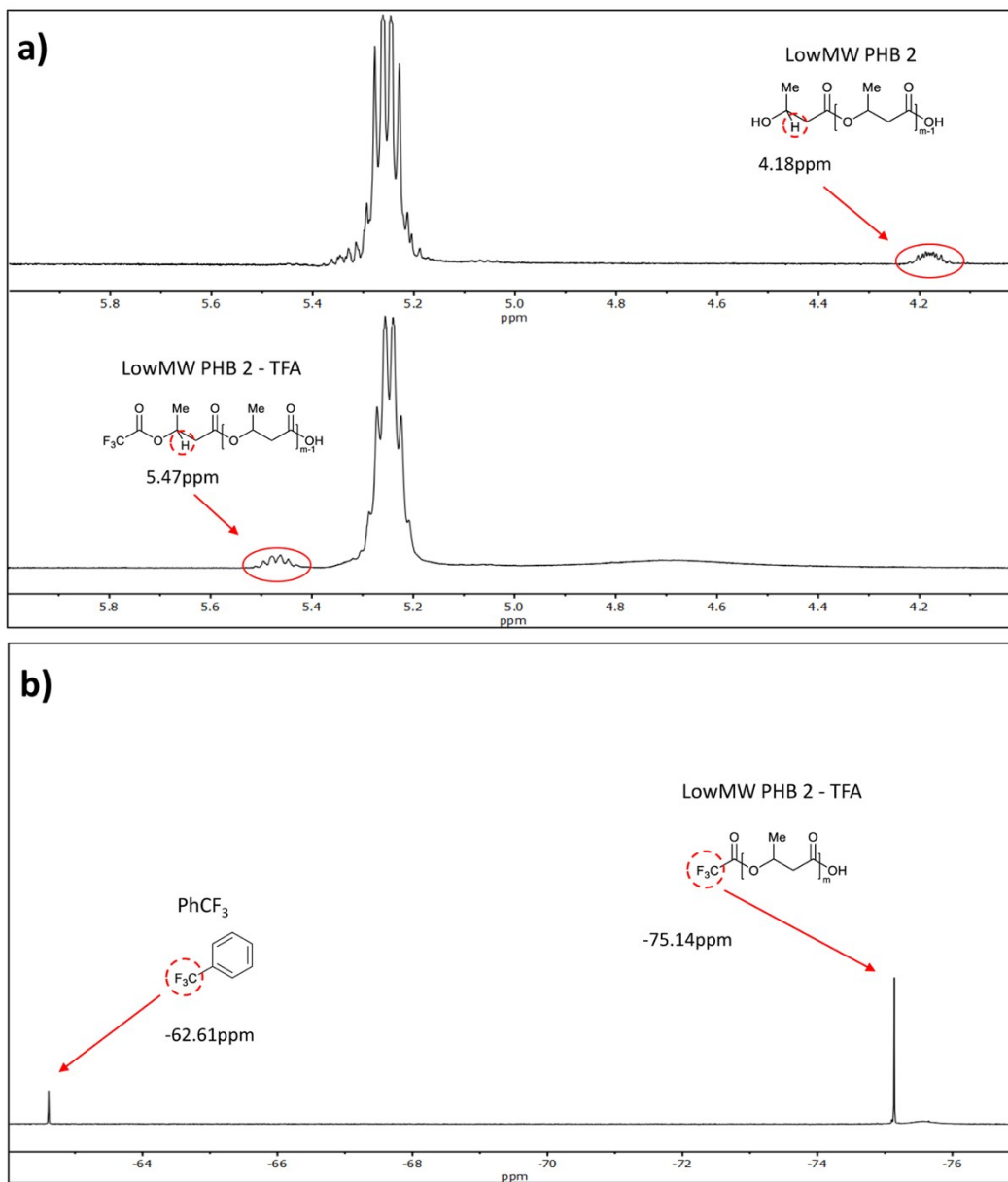


Figure S2. (a) Comparison between ¹H-NMR spectra (terminal region): LowMW PHB 2 (up) and LowMW PHB 2-TFA after 30 minutes of reaction (down). (b) ¹⁹F-NMR spectrum of LowMW PHB 2-TFA.

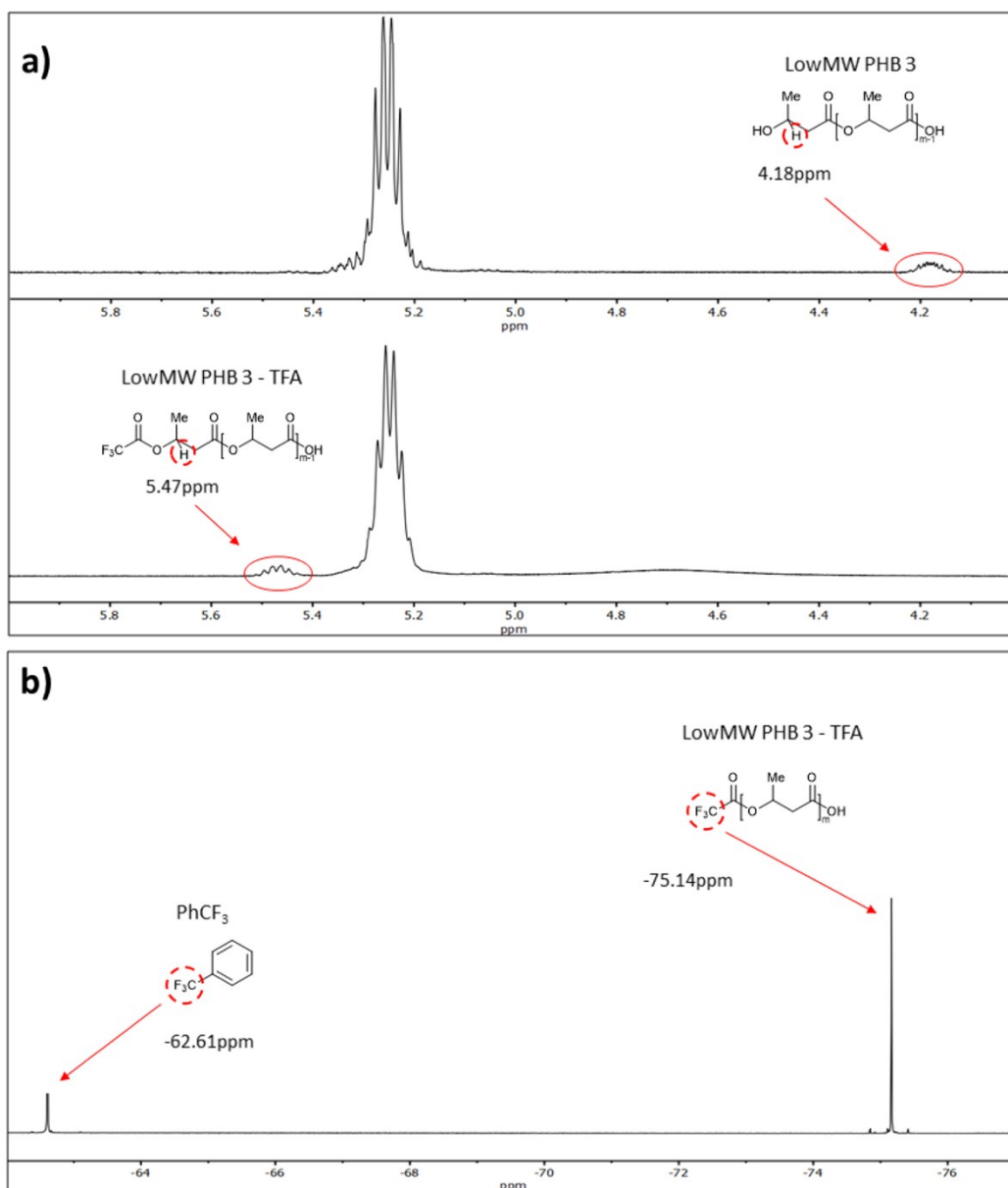


Figure S3. (a) Comparison between ¹H-NMR spectra (terminal region): LowMW PHB 3 (up) and LowMW PHB 3-TFA after 30 minutes of reaction (down). (b) ¹⁹F-NMR spectrum of LowMW PHB 3-TFA.

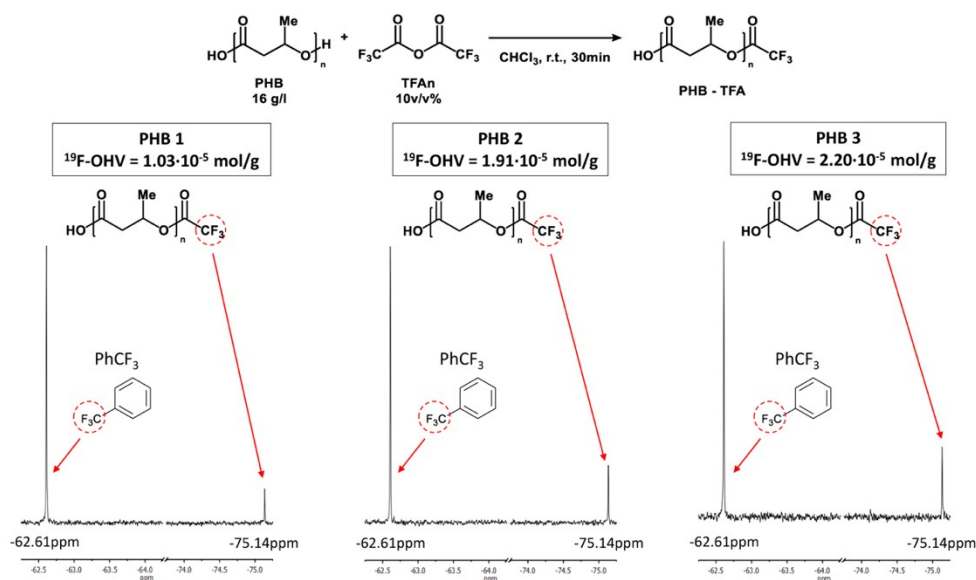


Figure S4. ^{19}F -NMR spectra of all analyzed PHB samples. At -62.61 ppm, singlet due to internal standard (PhCF_3) is visible, while trifluoromethyl moieties of PHB-TFA have a chemical shift of -75.14 ppm.

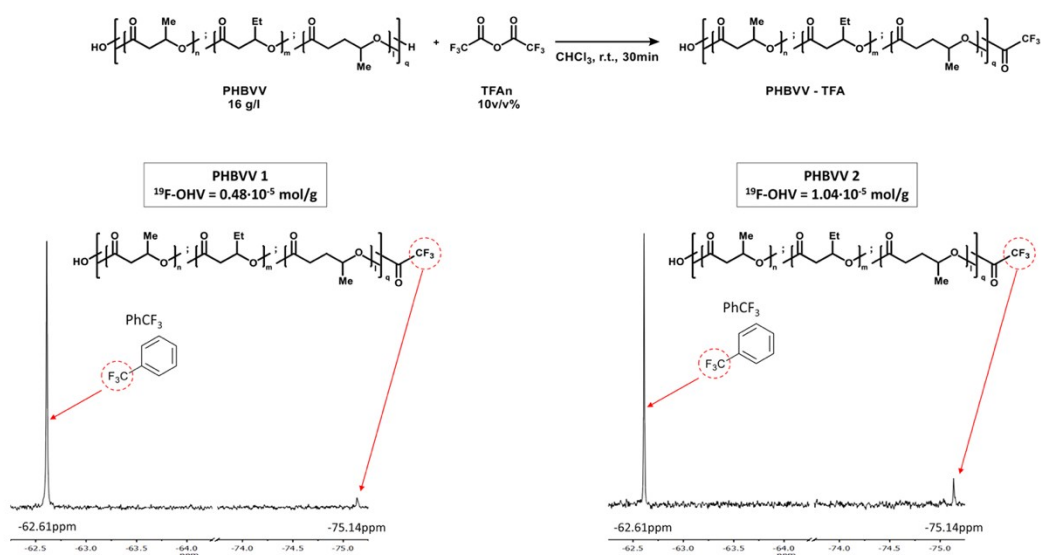


Figure S5. ^{19}F -NMR spectra of all analyzed PHBVV samples. At -62.61 ppm, singlet due to internal standard (PhCF_3) is visible, while trifluoromethyl moieties of PHBVV-TFA have a chemical shift of -75.14 ppm.

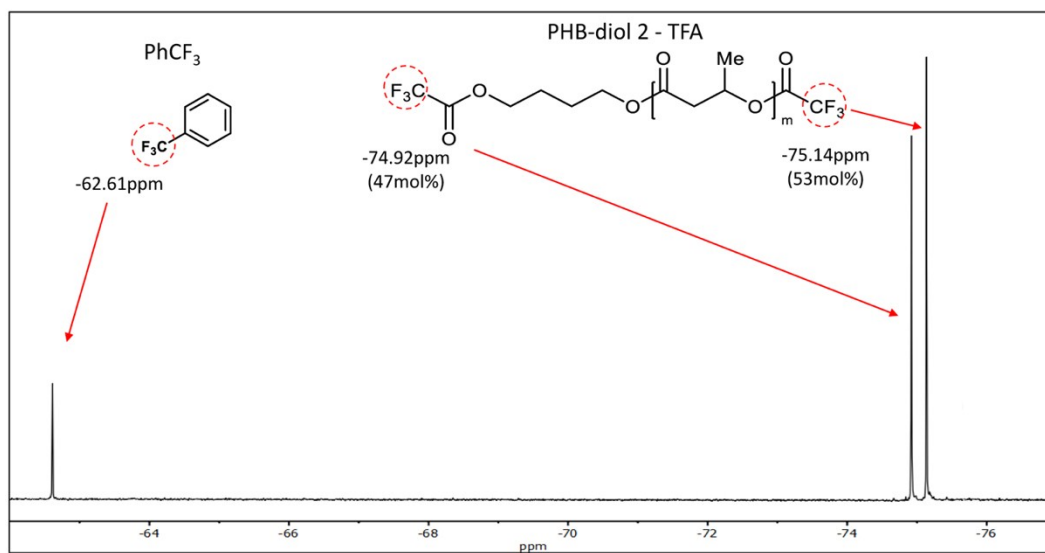


Figure S6. ^{19}F -NMR spectrum of trifluoroacetylated PHB-diol 2 (PHB-diol 2-TFA).

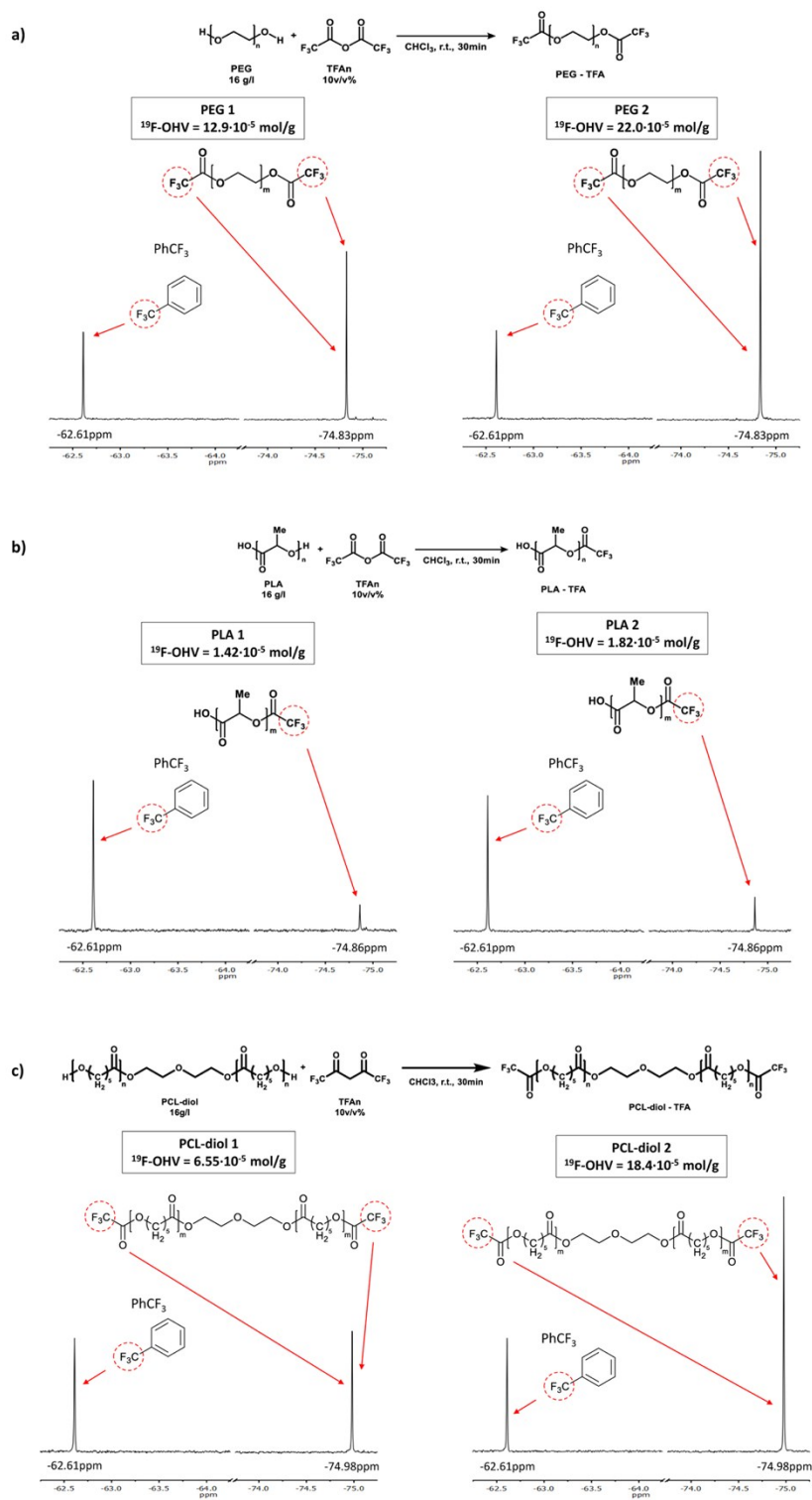


Figure S7. ^{19}F -NMR spectra of trifluoroacetylated hydroxyl terminated commercial polymers: (a) PEG, (b) PLA, (c) PCL-diol.