

Supplementary Materials

Impact of Bis-O-Dihydroferuloyl-1,4-Butanediol Content on the Chemical, Enzymatic and Fungal Degradation Processes of Poly(3-Hydroxybutyrate)

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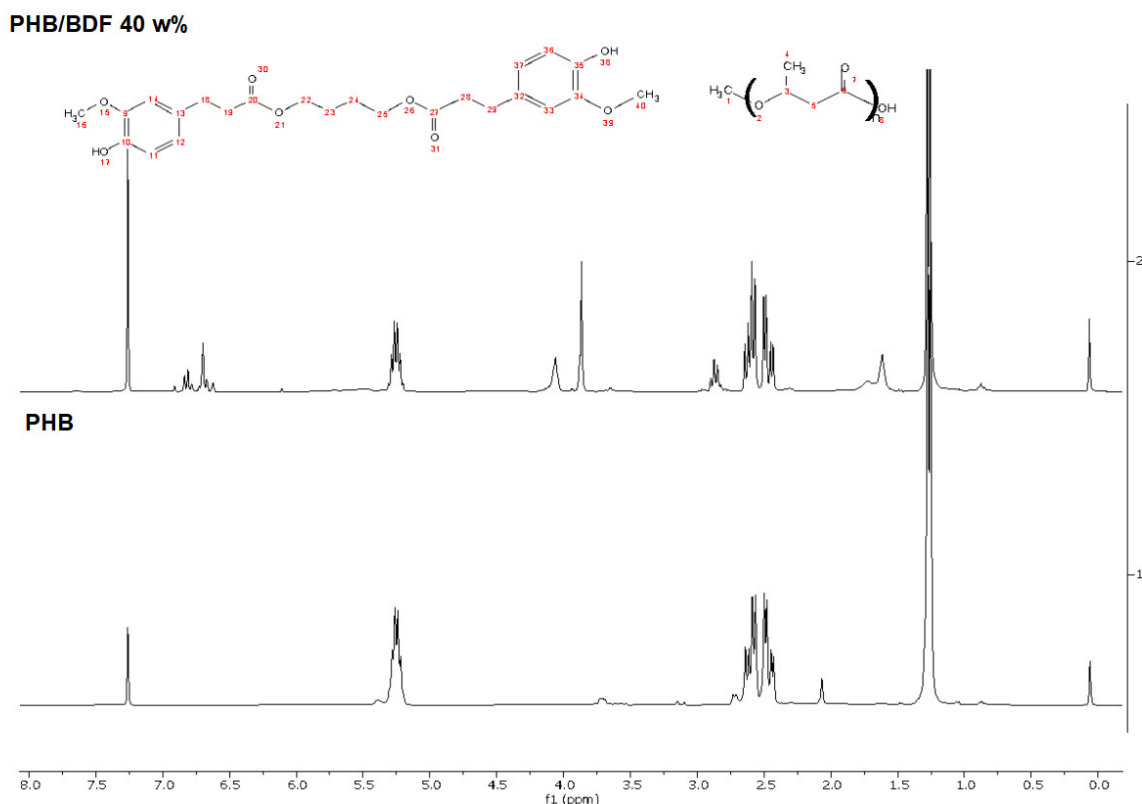


Figure S1. ^1H NMR (CDCl_3) spectra of PHB/BDF 40 w% and PHB.

PHB : ^1H NMR (300 MHz, CDCl_3 , δ ppm): 5.25 (dd, $J = 12.7, 6.3$ Hz, 1H), 2.78 – 2.37 (m, 2H), 1.27 (d, $J = 6.2$ Hz, 3H).

BDF : ^1H RMN (400 MHz, CDCl_3 , δ ppm): 6.82 (2H, d, $J = 8$, H_3), 6.68 (4H, m, $\text{H}_{4,6}$), 5.60 (2H, s large, H_1 , Ar OH), 4.06 (4H, m, H_{12}), 3.85 (6H, s, H_8), 2.87 (4H, t, $J = 8$, H_9), 2.59 (4H, t, $J = 8$, H_{10}), 1.62 (4H, m, H_{13}).

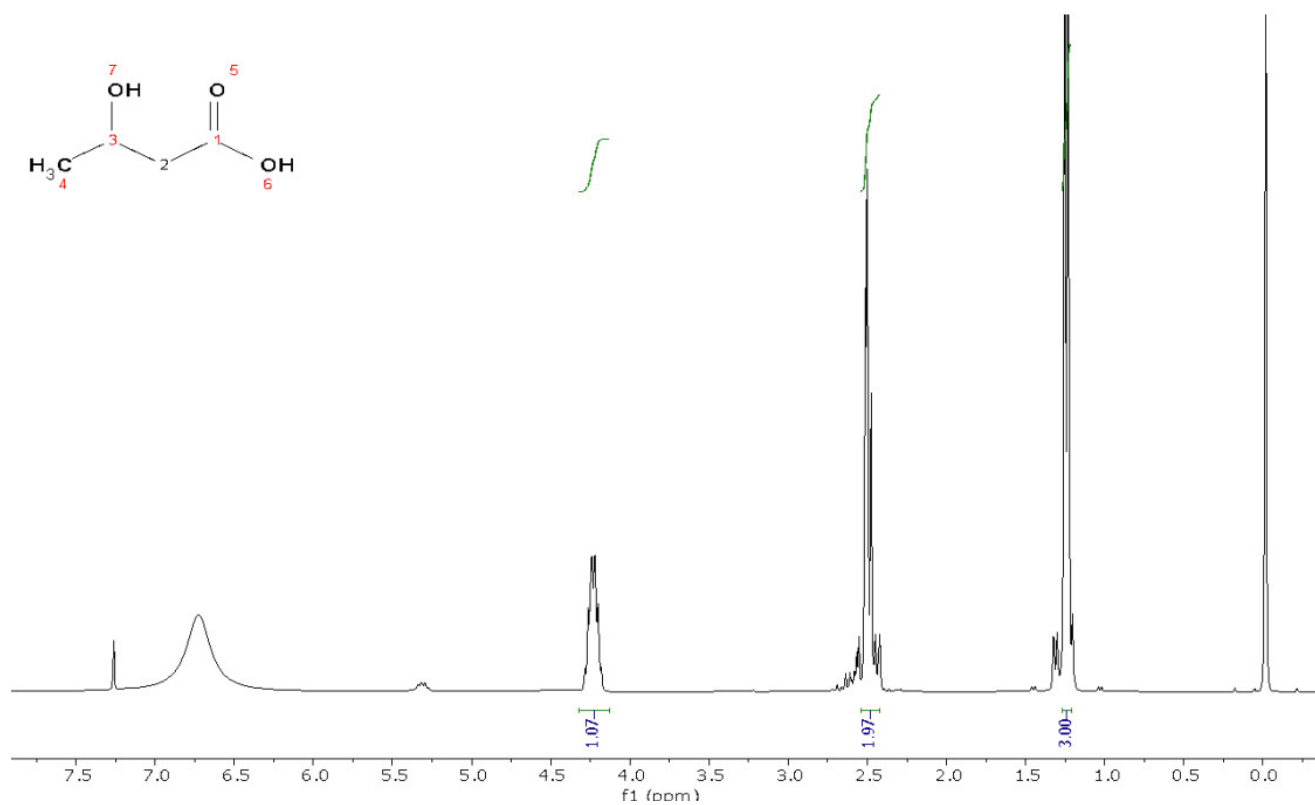


Figure S2. ^1H NMR (CDCl₃) spectrum of β -hydroxybutyric acid.

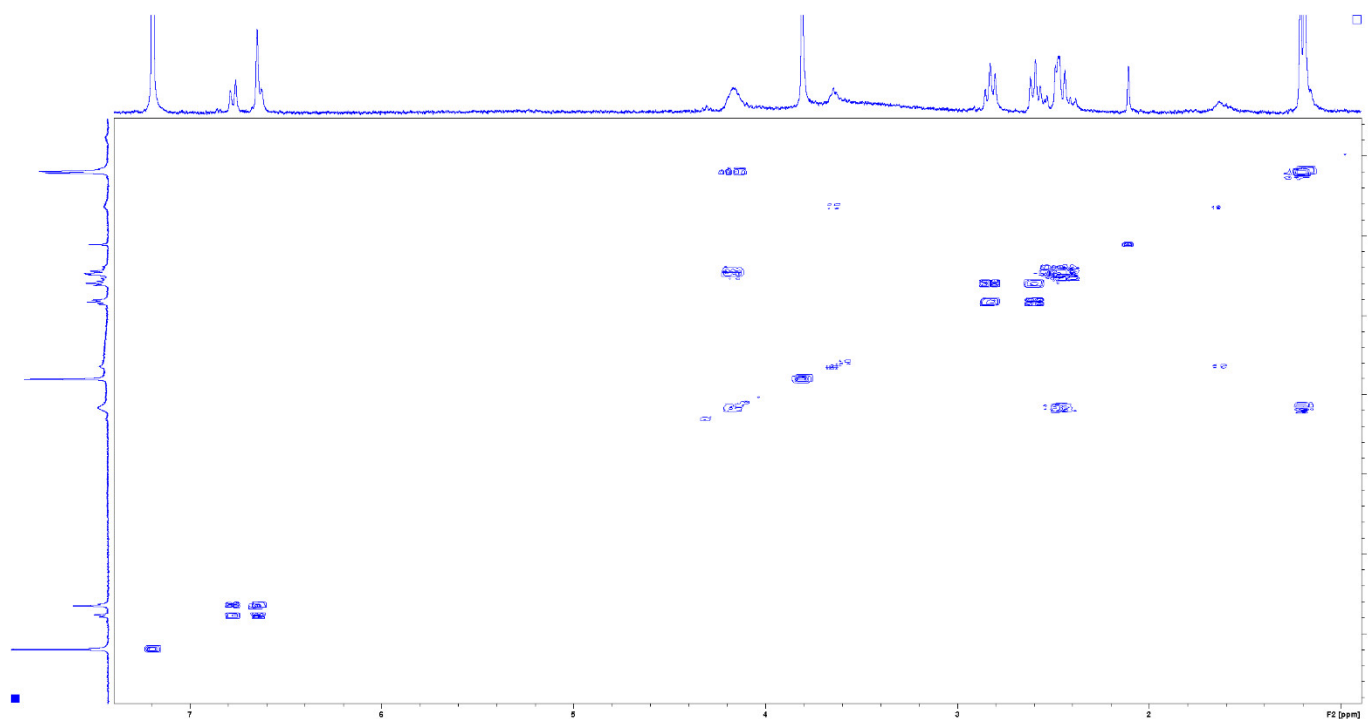


Figure S3. ^1H - ^1H COSY (CDCl₃) of PHB/BDF (40 w%) after 32 h of degradation with NaOH solution (0.25 M).

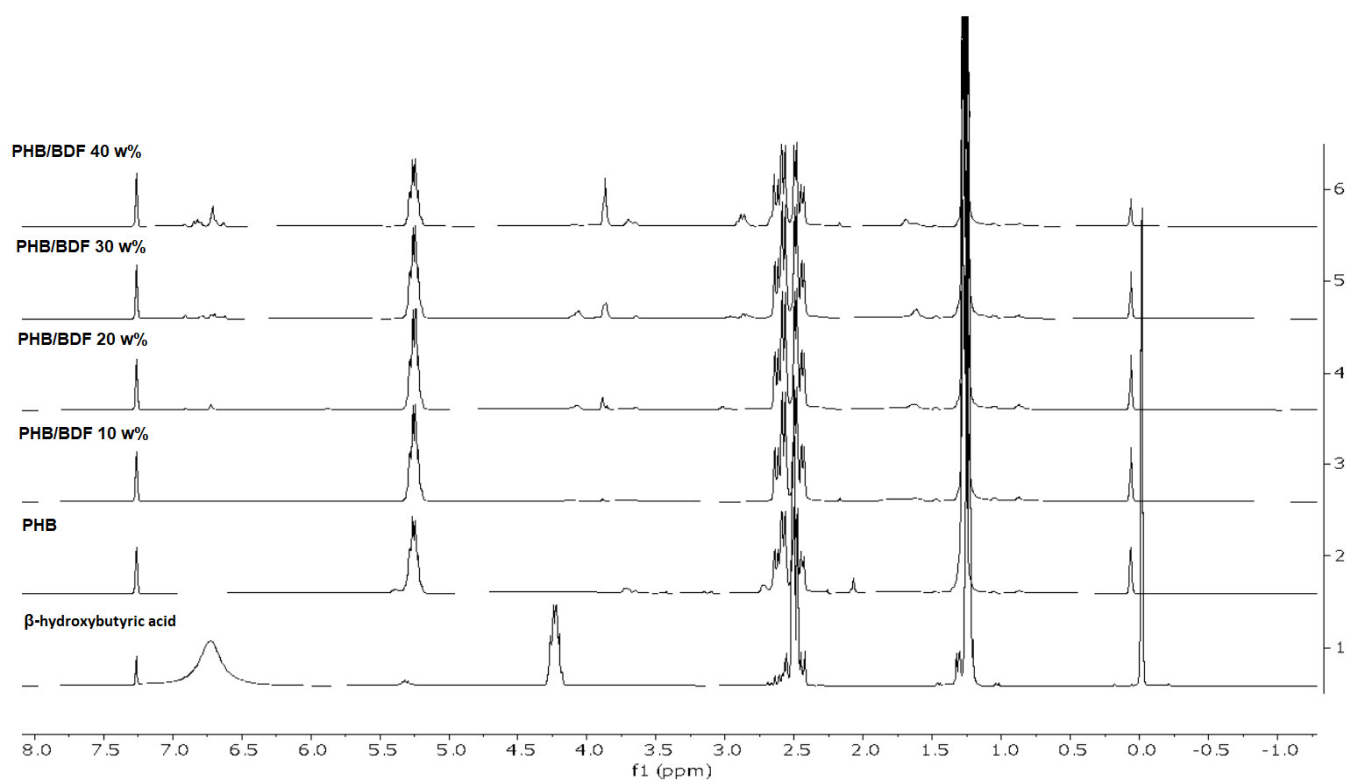


Figure S4. ^1H NMR (CDCl_3) spectra of powders of PHB blends after 7 days of reaction with 5.8 mg.mL^{-1} of Lipopan[®] 50 BG at $\text{pH} = 7.4$, 37°C and stirred at 50 rpm.

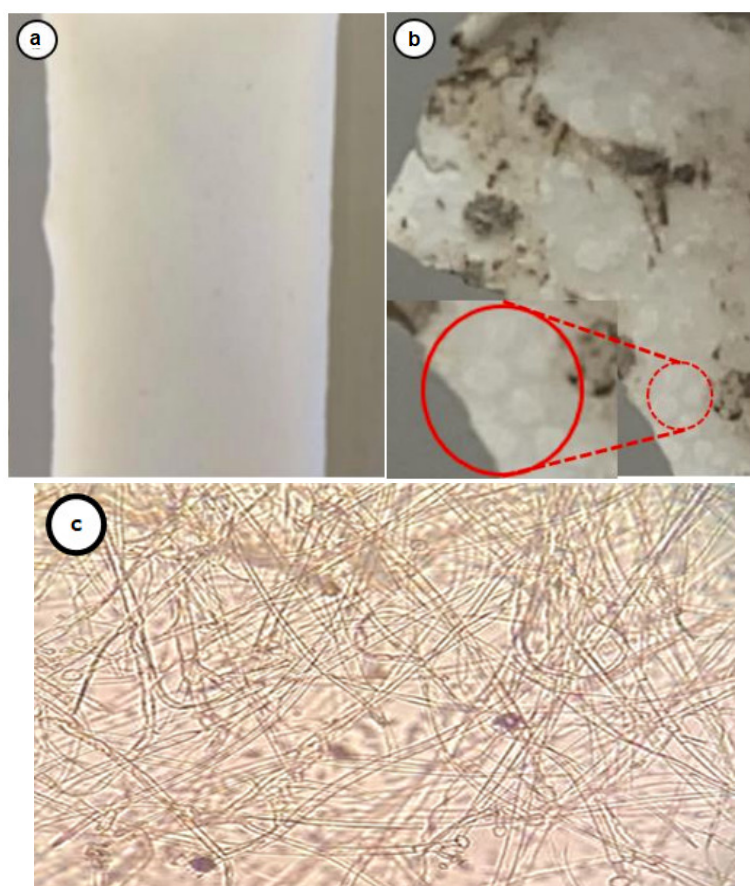


Figure S5. Pictures of the PHB film a./ at t0 and b./ after 4 weeks in the soil samples c./ microscopic observation of *A. elegans*, the aseptate hyphae and sporangia are visible.