Supporting information for

Feasible Analytical Protocol of Residual polymers in Culture Medium after Biodegradation Testing

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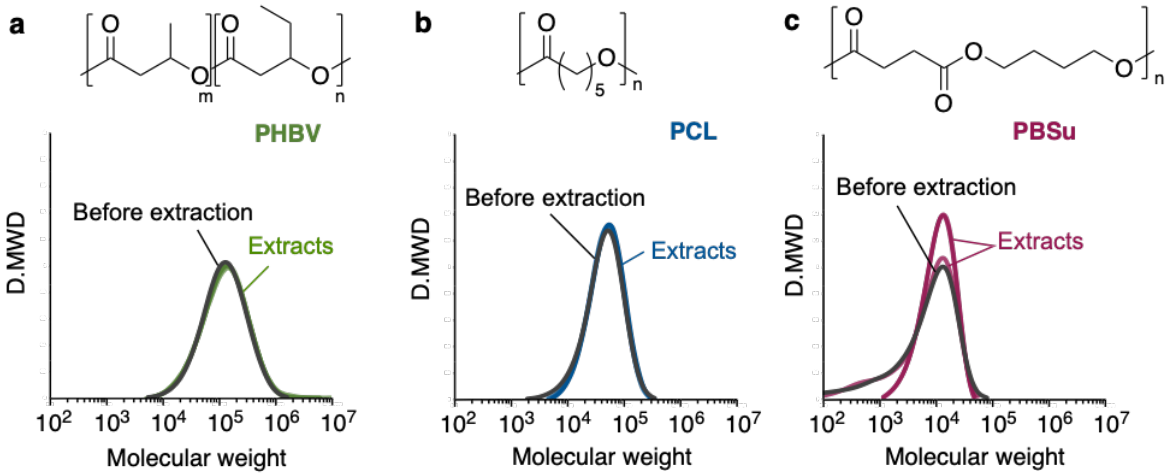

Figure S1. The SEC curves of the original polymer and the extracts from the culture media; **a**. PHBV, **b**. PCL, and **c**. PBSu. D.MWD: differential weight fraction.

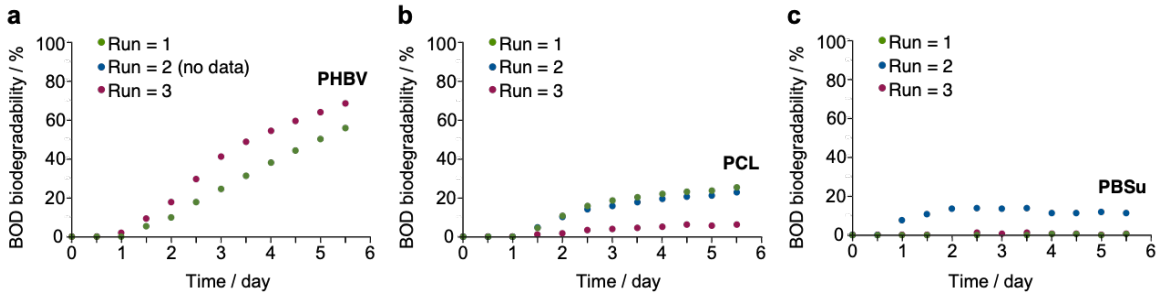

Figure S2. BOD biodegradation curves of **a**. PHBV, **b**. PCL, **c**. PBSu with seawater for 6 days.

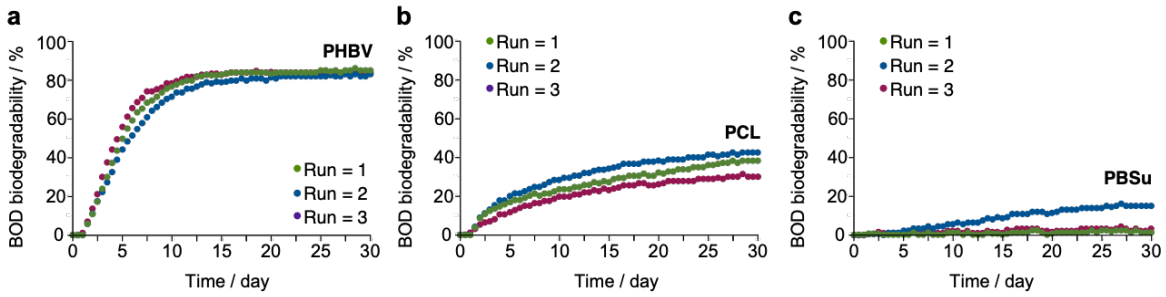

Figure S3. BOD biodegradation curves of **a**. PHBV, **b**. PCL, **c**. PBSu with seawater for 30 days.

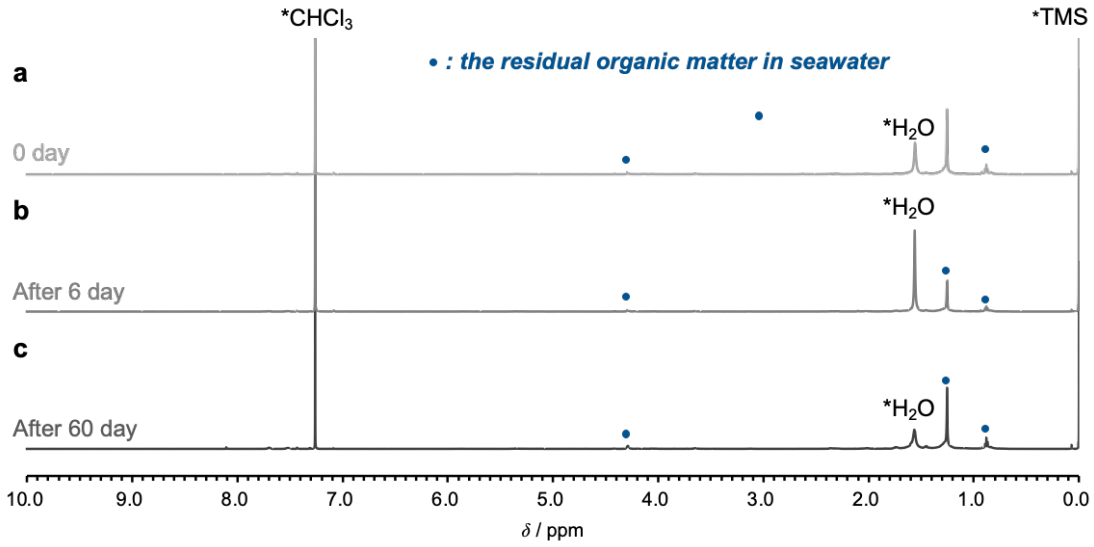

Figure S4. ^{1}H NMR spectra (600 MHz, $CDCl_3$, 291 K, δ) of the extracts from the BOD media of the blank solution **a**. before BOD biodegradation testing, after BOD biodegradation testing **b**. after 6 days and **c**. 30 days.

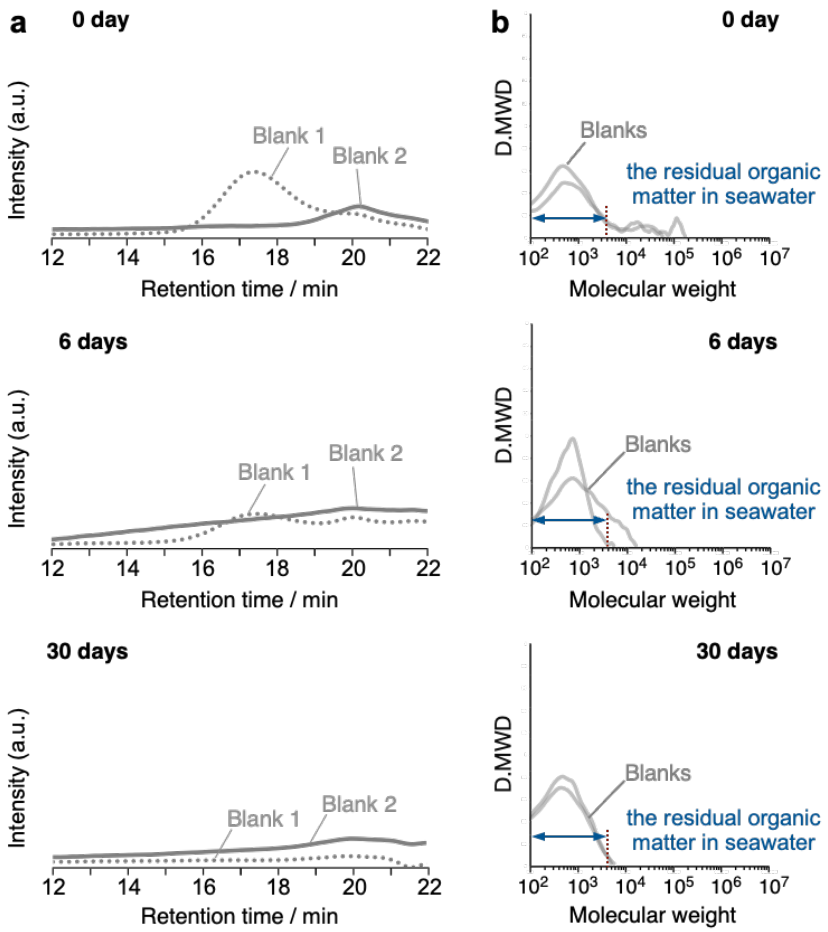

Figure S5. The SEC curves of the extracts from the BOD media after the BOD biodegradation testing: **a**. retention time vs. intensity, **b**. differential weight fraction vs. molecular weight.

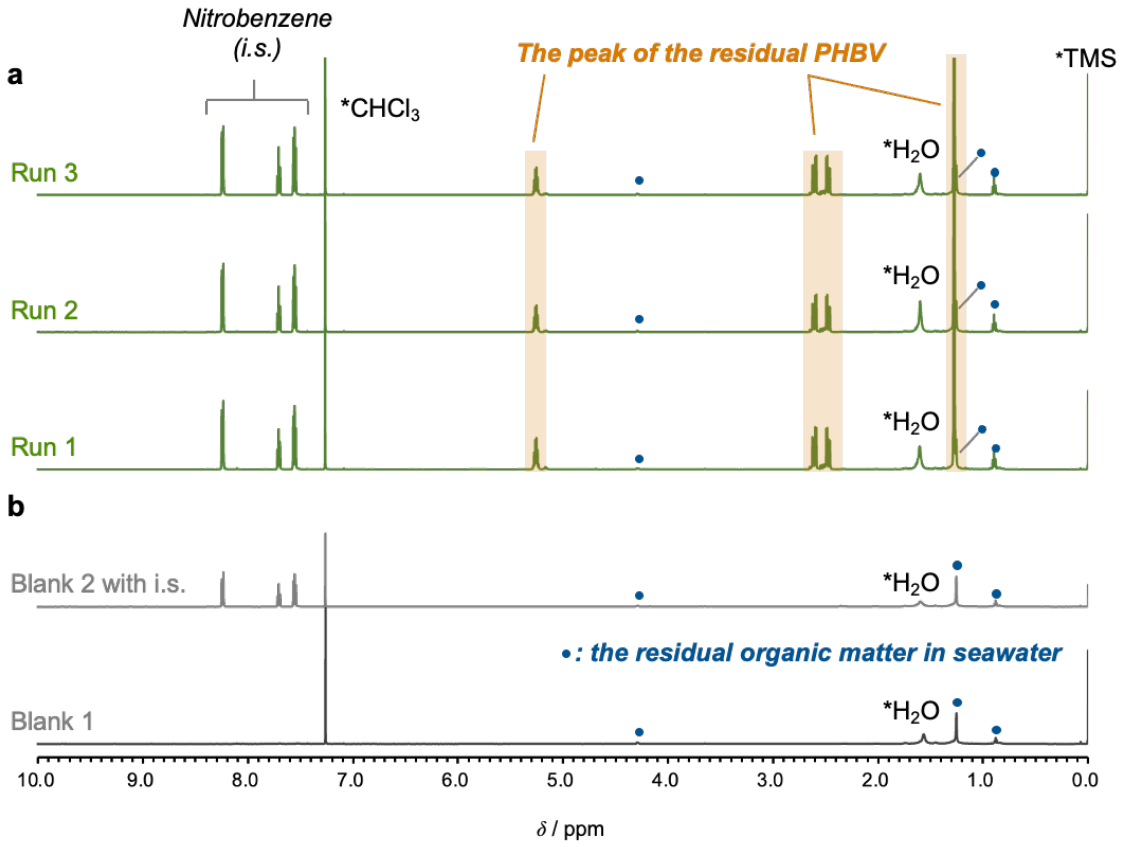

Figure S6. ^{1}H NMR spectra (600 MHz, $CDCl_3$, 291 K, δ) of the extracts from the BOD media of **a**. the PHBV and **b**. the blank solutions before BOD biodegradation testing.

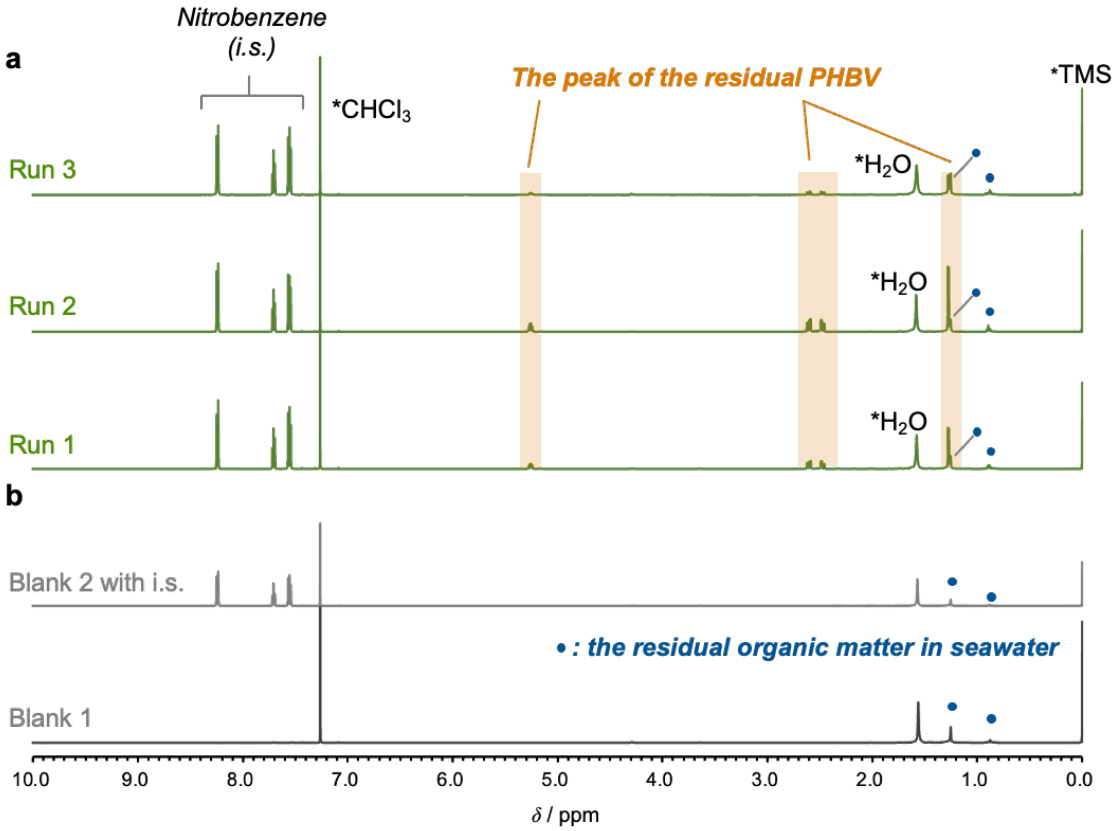

Figure S7. ^{1}H NMR spectra (600 MHz, $CDCl_3$, 291 K, δ) of the extracts from the BOD media of **a**. the PHBV and **b**. the blank solutions after BOD biodegradation testing for 6 days.

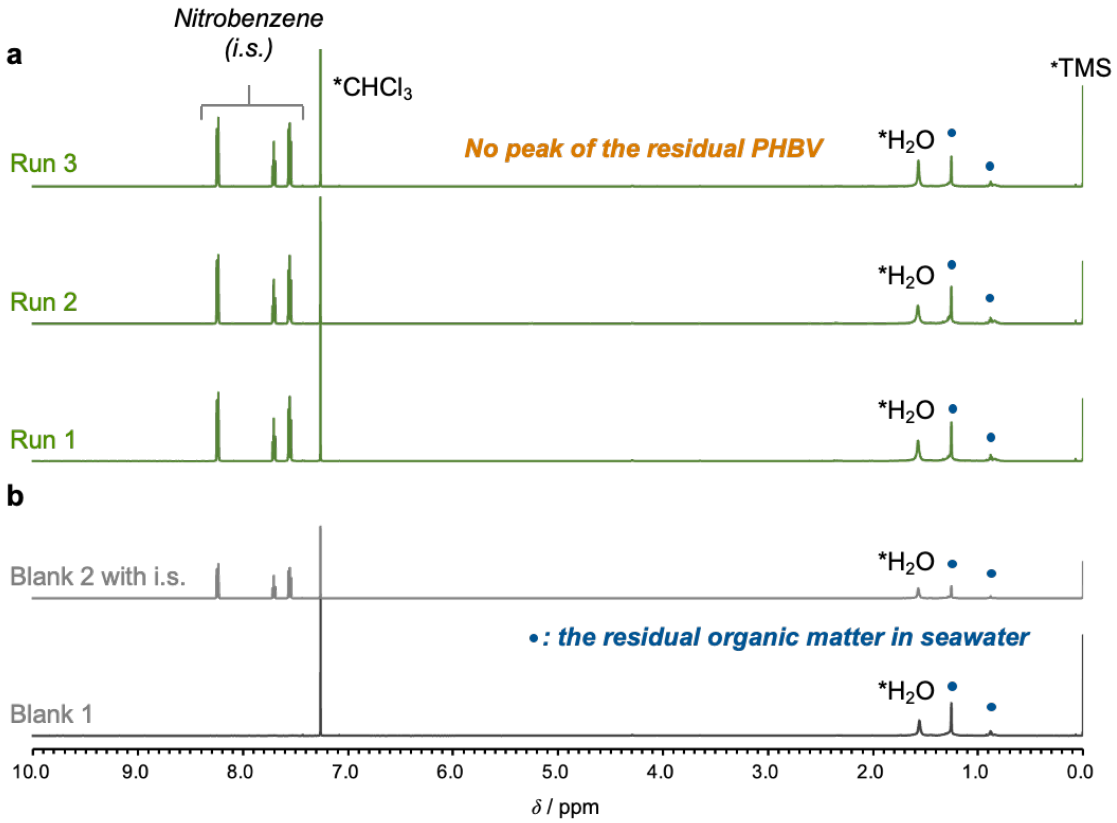

Figure S8. ^{1}H NMR spectra (600 MHz, $CDCl_3$, 291 K, δ) of the extracts from the BOD media of **a**. the PHBV and **b**. the blank solutions after BOD biodegradation testing for 30 days.

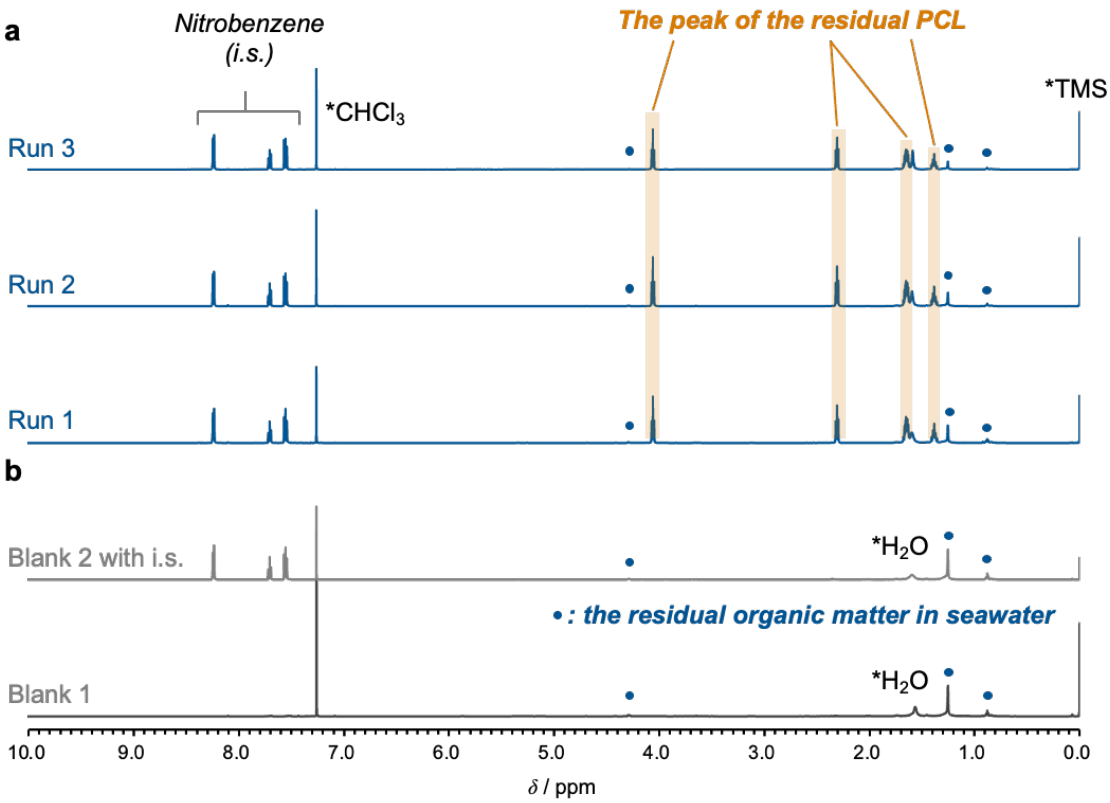

Figure S9. ^{1}H NMR spectra (600 MHz, $CDCl_3$, 291 K, δ) of the extracts from the BOD media of **a**. the PCL and **b**. the blank solutions before BOD biodegradation testing.

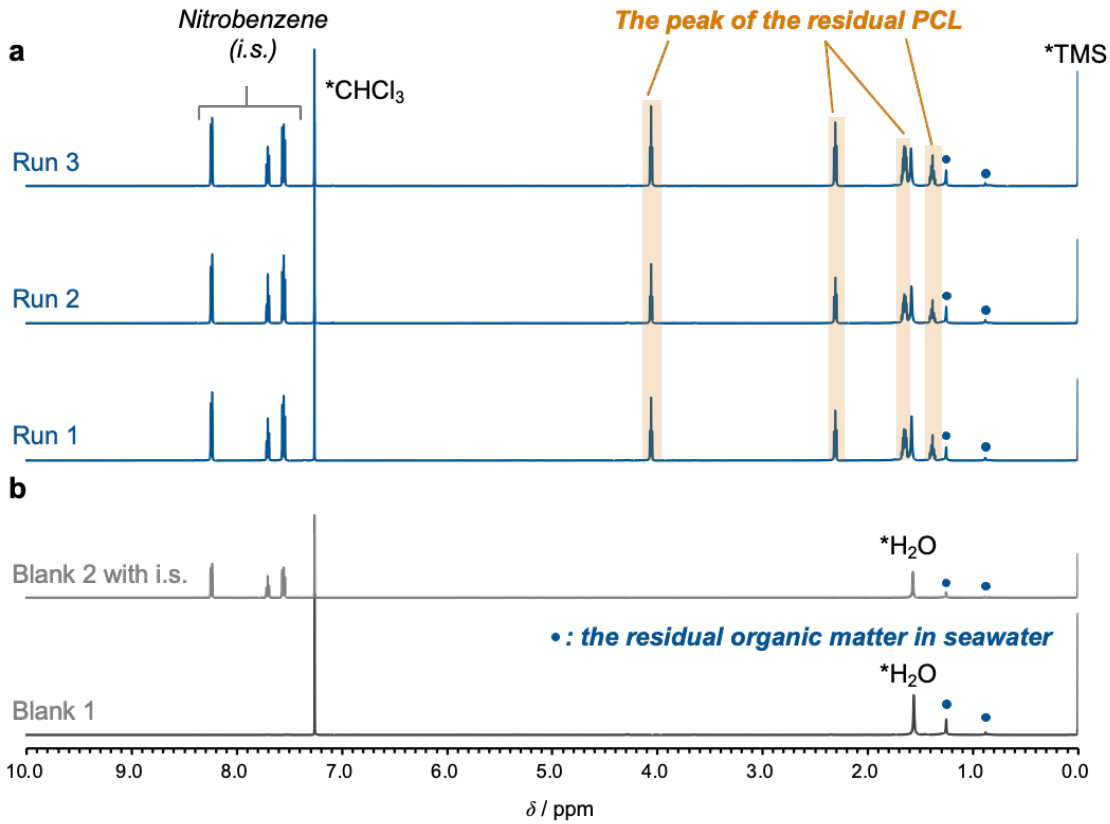

Figure S10. ^{1}H NMR spectra (600 MHz, $CDCl_3$, 291 K, δ) of the extracts from the BOD media of **a**. the PCL and **b**. the blank solutions after BOD biodegradation testing for 6 days.

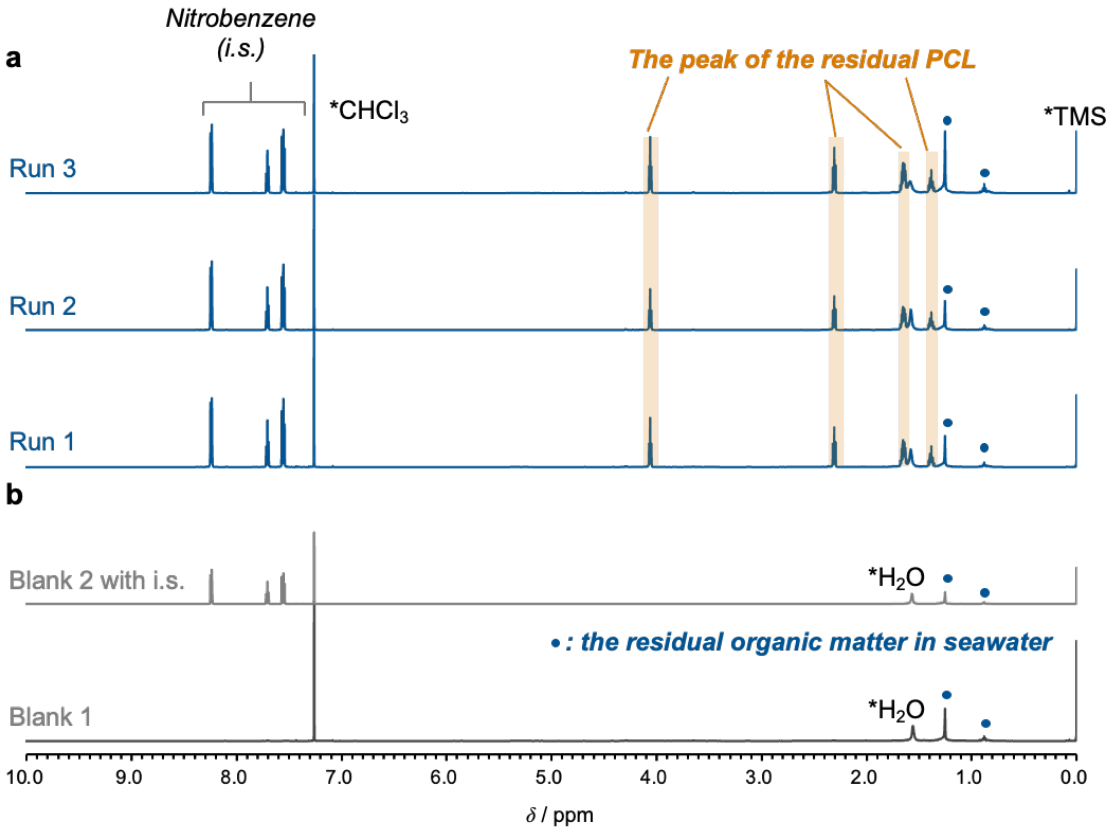

Figure S11. ^{1}H NMR spectra (600 MHz, $CDCl_3$, 291 K, δ) of the extracts from the BOD media of **a**. the PCL and **b**. the blank solutions after BOD biodegradation testing for 30 days.

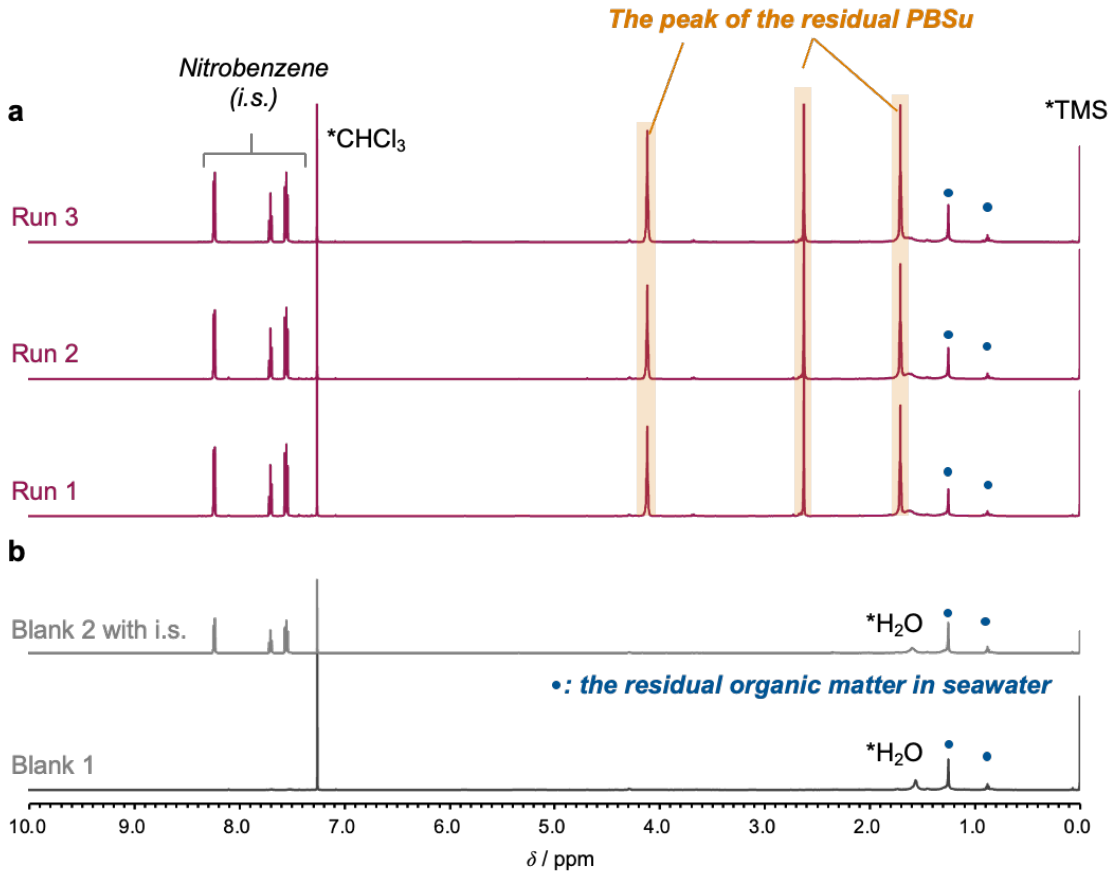

Figure S12. ^{1}H NMR spectra (600 MHz, $CDCl_3$, 291 K, δ) of the extracts from the BOD media of **a**. the PBSu and **b**. the blank solutions before BOD biodegradation testing.

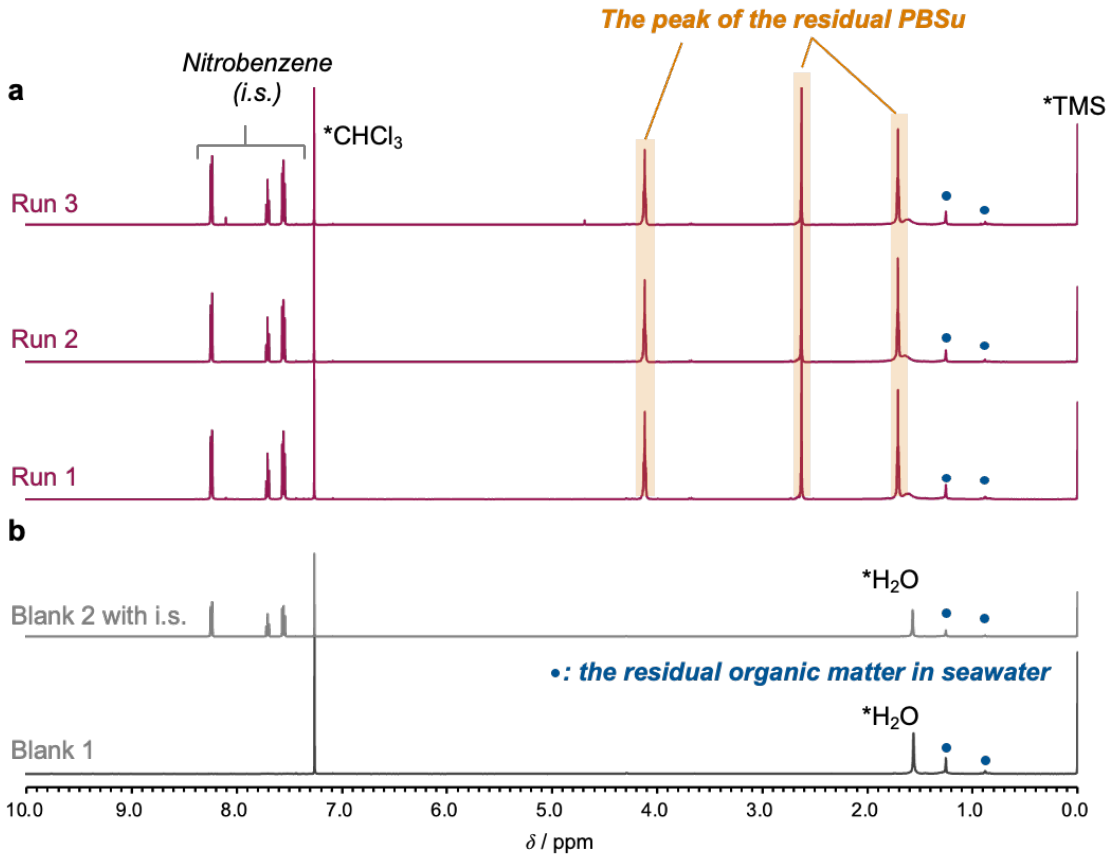

Figure S13. ^{1}H NMR spectra (600 MHz, $CDCl_3$, 291 K, δ) of the extracts from the BOD media of **a**. the PBSu and **b**. the blank solutions after BOD biodegradation testing for 6 days.

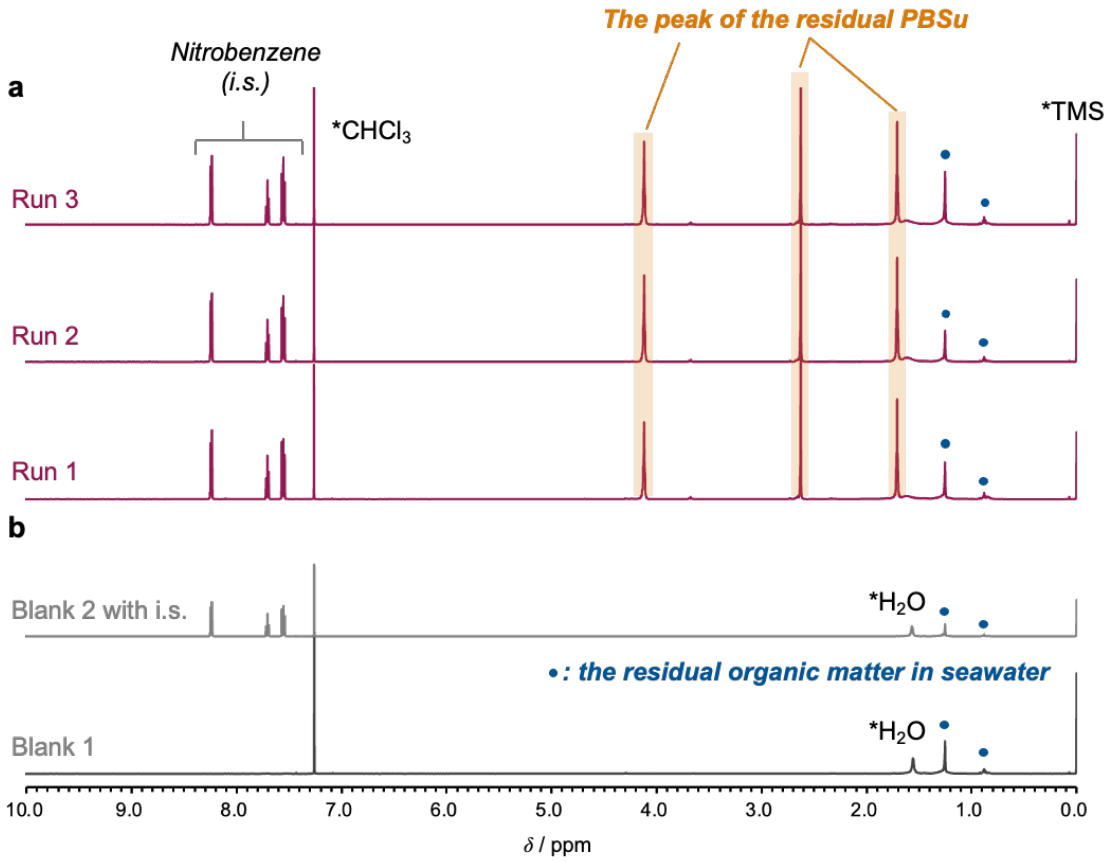

Figure S14. ^{1}H NMR spectra (600 MHz, $CDCl_3$, 291 K, δ) of the extracts from the BOD media of **a**. the PBSu and **b**. the blank solutions after BOD biodegradation testing for 30 days.