

Supplementary Materials

Title of the manuscript **Biodegradation of Post-Consumer Expanded Polystyrene and Low-Density Polyethylene by *Tenebrio Molitor* L. Larvae**

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Figure S1. FTIR spectra of wheat bran frass control and THF solvent.

Figure S2. GPC chromatograms of wheat bran frass control and THF blank.

Figure S3. GC–MS total ion chromatogram (TIC) of wheat bran frass control.

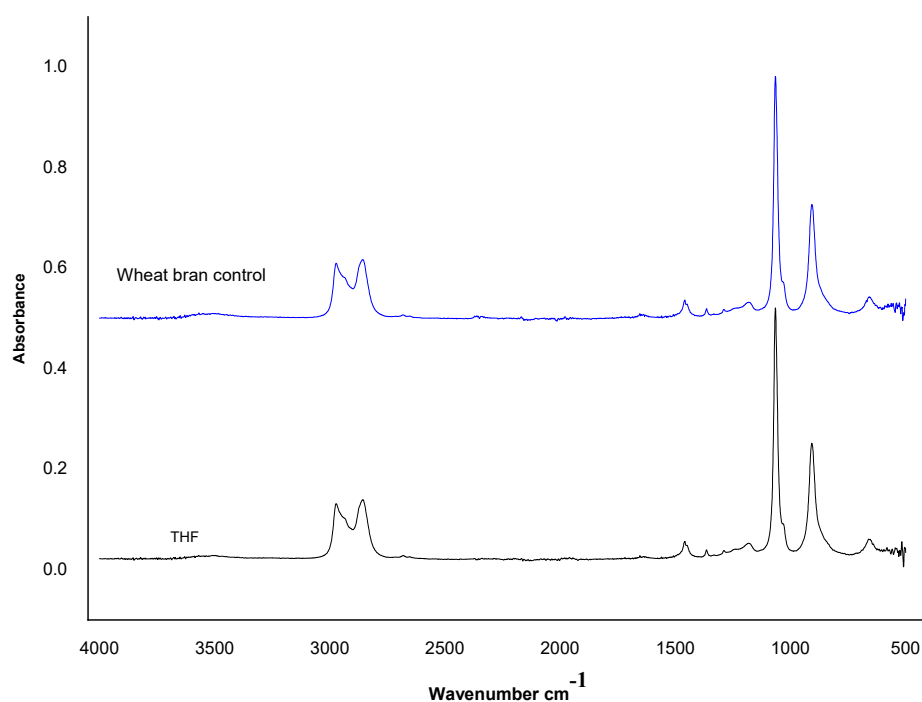


Figure S1. FTIR spectra of frass collected from *Tenebrio molitor* L. larvae reared exclusively on wheat bran (analytical control) and of the THF solvent blank, processed under identical extraction and analytical conditions. No additional absorption bands beyond those attributable to the solvent were detected, confirming the absence of detectable endogenous biological background under the applied FTIR conditions.

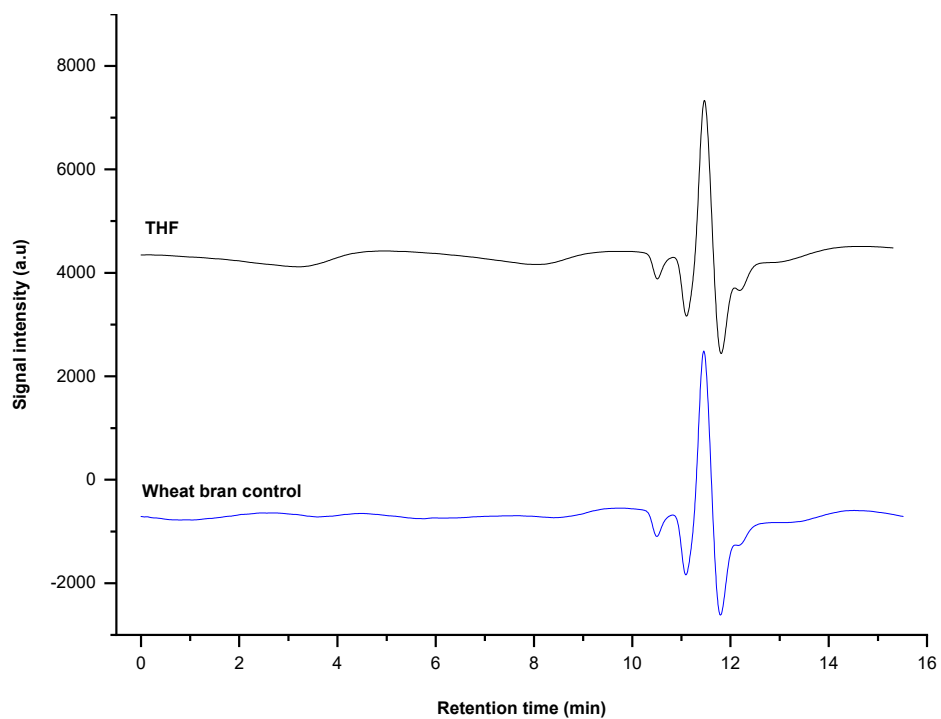


Figure S2. GPC chromatograms of tetrahydrofuran (THF) solvent and frass collected from larvae reared exclusively on wheat bran, processed under identical THF-based extraction and analytical conditions. No polymer-related chromatographic signals were detected in the bran-only control, confirming the absence of detectable biological background interference in the GPC analysis.

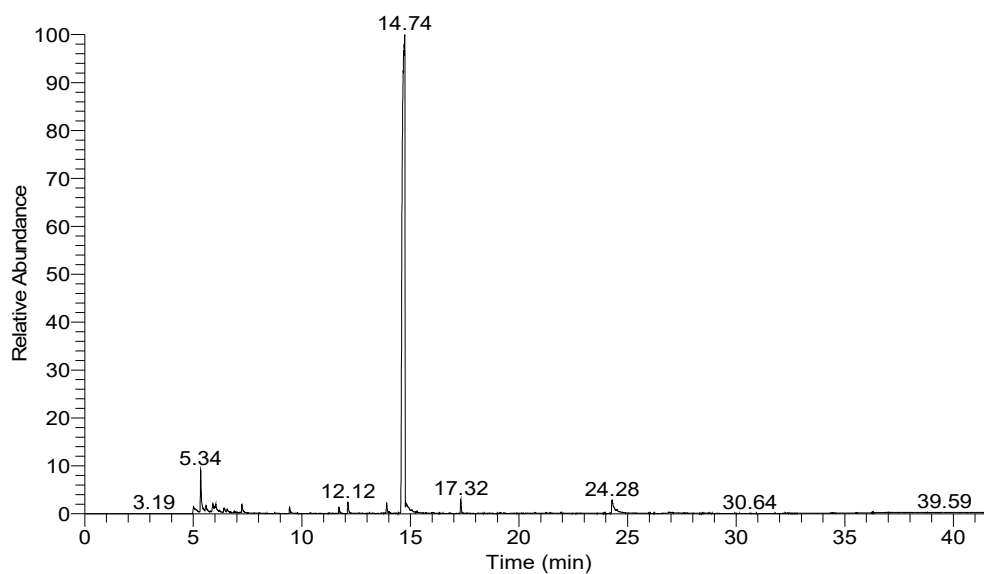


Figure S3. Total ion chromatogram (TIC) obtained by GC–MS analysis of THF extracts of frass collected from *Tenebrio molitor* larvae reared exclusively on wheat bran (analytical control). The chromatogram is dominated by solvent-related signals and does not display additional peaks comparable to those detected in plastic-fed samples, indicating the absence of detectable polymer-related or biological background signals under the applied extraction and analytical conditions.