

Supporting Information

Active biodegradable packaging films modified with grape seeds lignin

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Composting test

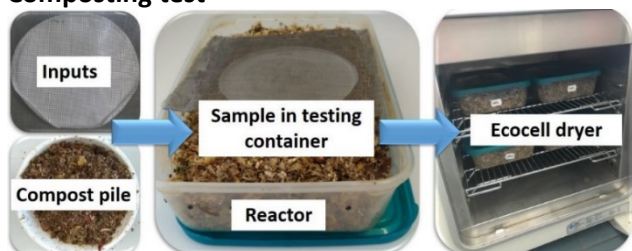


Fig. S1. PHB and PHB/PHA films placed inside the compost reactor.

Phytotoxicity experiment

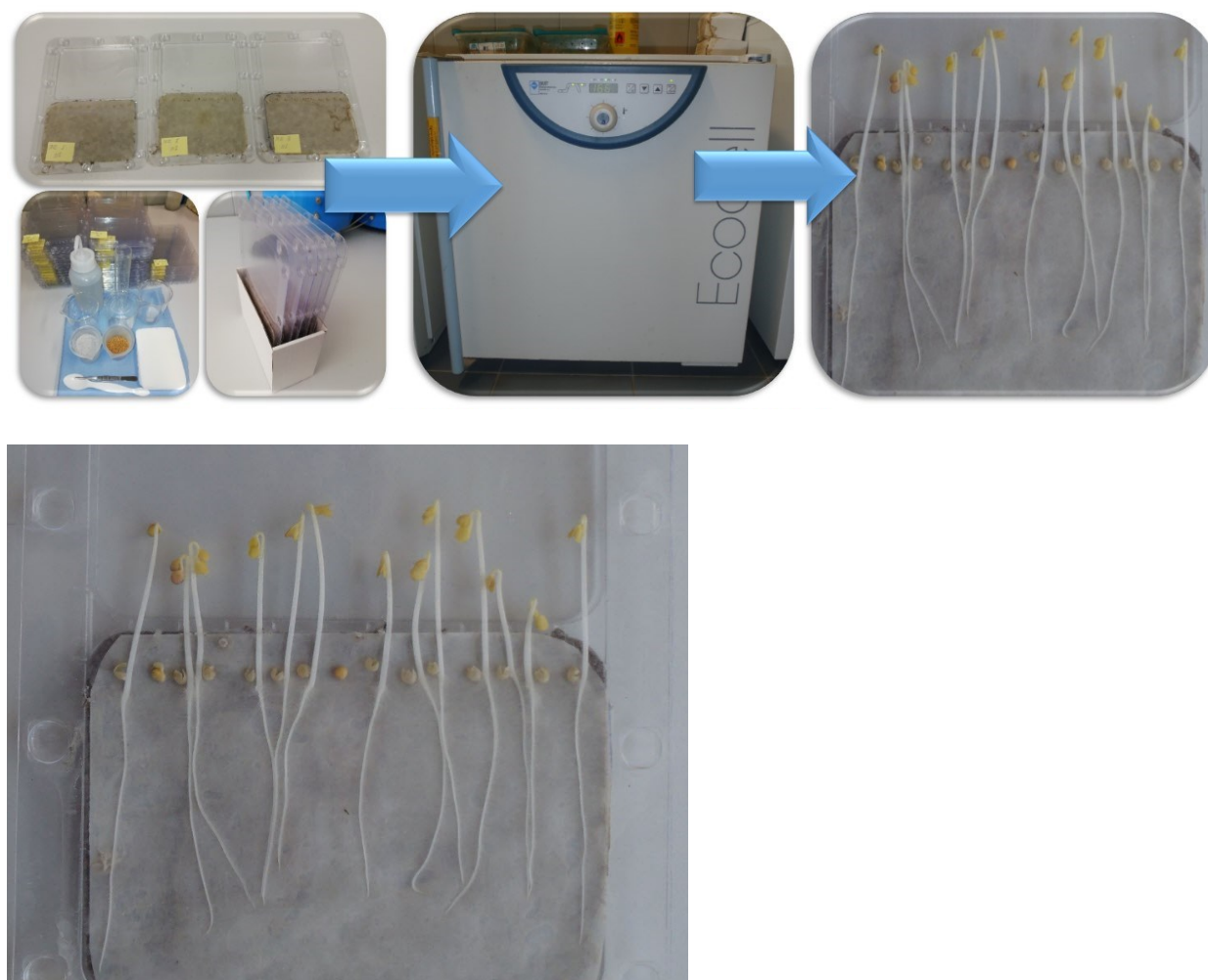


Fig. S2. Design of Phytotoxkit Test.

Results

Properties of grape seeds lignin, Size Exclusion Chromatography

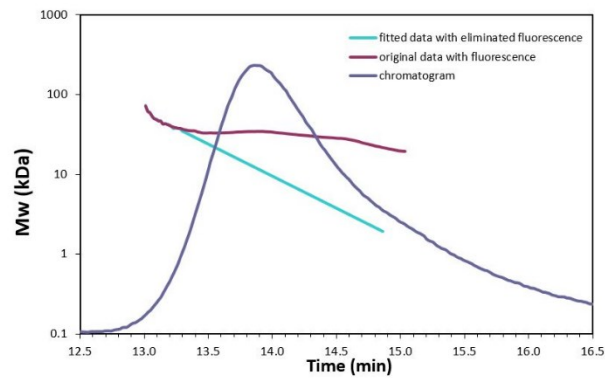


Fig. S3. SEC chromatogram of acetylated grape seeds lignin.

Monitoring of biodegradation of PHB/PHA films in compost

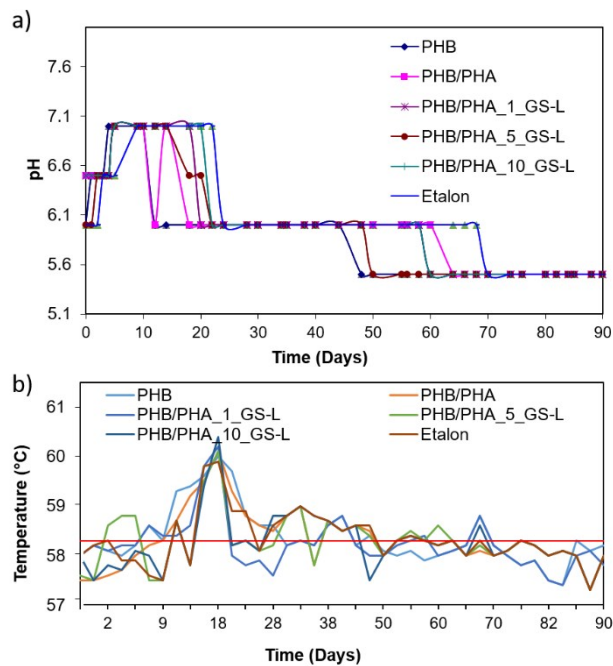


Fig. S4. Monitoring of (a) pH and (b) temperature variations with respect to time during the composting period.

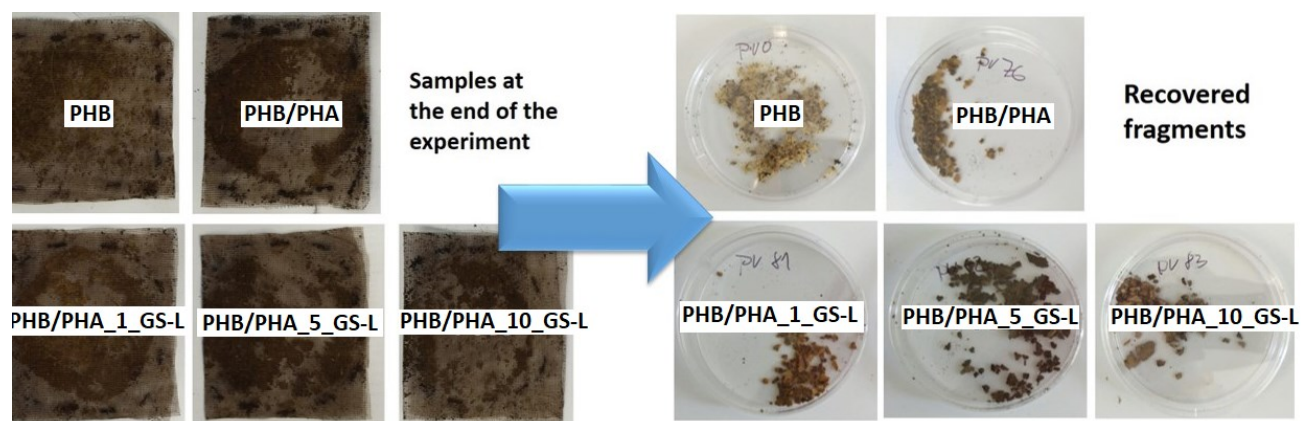


Fig. S5. Photographs of the recovered fragments of films at the end of the composting experiment.