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Microcellular foaming of arabinoxylan and PEGylated arabinoxylan with supercritical CO₂

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Highlights

- Polyethylene glycol of various molecular weights were successfully coupled to arabinoxylan.
- The PEG chains act as an internal plasticizer, as indicated by a reduction in T_g by up to 25°C.
- Foaming experiments were conducted in a batch foaming process with supercritical CO₂.
- The unmodified arabinoxylan sample was found to produce the best foam morphology.

ABSTRACT

In this study, arabinoxylan extracted from barley husks was reacted with polyethylene glycol (PEG) of various molecular weights to introduce an internal plasticizer into the polymer

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