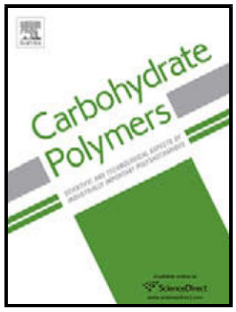


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# Microcellular foaming of arabinoxylan and PEGylated arabinoxylan with supercritical $CO_2$

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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 $CO_2$.
- 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