

## Accepted Manuscript

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**Valorization of Brewer's spent grain to prebiotic oligosaccharide: production, xylanase catalyzed hydrolysis, *in-vitro* evaluation with probiotic strains and in a batch human fecal fermentation model**

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## Highlights

- Two fractions of arabinoxylan were extracted from Brewer's spent grain
- Arabinoxylan purity of 45-55 % was obtained
- 9 xylanases hydrolyzed the arabinoxylan yielding different oligosaccharide patterns
- Fermentation of the hydrolysates was studied using selected probiotic bacteria
- Human gut microbiota fermented the hydrolysates as fast as fructooligosaccharides

## Abstract

Brewer's spent grain (BSG) accounts for around 85 % of the solid by-products from beer production. BSG was first extracted to obtain water-soluble arabinoxylan (AX). Using subsequent alkali extraction (0.5 M KOH) it was possible to dissolve additional

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