Maximization of C5 sugars from wheat bran over heterogeneous catalysts

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4. Conclusions

The production of C5 sugars from wheat bran has been optimized in a two-step process consisting of a hydrothermal fractionation of AX and their subsequent hydrolysis using $RuCl_3$/Al-MCM-48. From the fractionation step, almost 80% of the AX were solubilized into the aqueous phase. After the hydrolysis process, a high hydrolysis yield of xylo- and arabino- oligosaccharides into xylose (94%) and arabinose (96%), respectively, has been achieved. Ru^{+3}, as a moderate Lewis acid, has demonstrated to be active in the fractionation and hydrolysis processes of the hemicellulosic part of wheat bran.