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## CHEMICAL CHARACTERISATION AND DILUTE-SUGAR HYDROLYSIS OF RICE HULLS FROM AN ARTISAN MILL

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### Abstract

The chemical composition of rice hulls produced in an artisan mill and its potential for dilute-sugar hydrolysis was investigated. The carbohydrate fraction represented 59.2% of the dry weight. Cellulose, with 36.6%, was the main component, followed by xylan with 12.6%. The contribution of starch (8.7%) was also detected. The content of ash (1.1%) was comparable with that of rice hulls obtained in industrial mills. Dilute-sugar hydrolysis at different temperatures, from 160 to 210°C, was evaluated for product yield. For starch hydrolysis, the concentration of glucose in the hydrolysates was higher than the values that have previously been reported for industrial sorts of rice hulls under these conditions. The xylan-to-xylose conversion increased steadily with increasing temperature and reached a maximum (67.7%) at 190°C. Further increases of the hydrolysis temperature did not significantly affect the conversion.