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| Author<br><b>Jesper Svedberg</b>   |  |  |
| Title (English)<br><b>Thermochemical pretreatment and enzymatic saccharification of lignocellulose for biofuel production</b>  |  |  |
| Title (Swedish)  |  |  |
| Abstract<br><p>The efficiency of five different thermochemical pretreatment methods has been evaluated for efficiency and suitability for laboratory scale use with the purpose of facilitating enzymatic saccharification of aspen sawdust and oat straw. The ground substrates were first pretreated, while process conditions such as temperature, time, catalyst concentration and substrate loading were varied. The pretreated substrates were then saccharified using a commercially available enzyme mixture and finally the composition and concentration of solubilized sugars were determined using a high performance anion exchange chromatography system with pulsed amperometric detection (HPAE-PAD).</p> <p>The most efficient pretreatment method appears to be dilute acid and least efficient hot water, but problems achieving stable measurements in the analysis step limits the quality of the results and further studies are needed.</p> |  |  |
| Keywords<br>Lignocellulose, ethanol, cellulases, thermochemical pretreatment   |  |  |
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