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
of

Agriculture and Forestry

**Hydrolysis of Polysaccharides with 77% Sulfuric Acid for Quantitative  
Saccharification**

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 [Keywords](#)  
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**Abstract:** Classical standard hydrolysis of polysaccharides with 72% sulfuric acid was modified in 2 manners. In order to avoid treatment in an autoclave at 120 °C under pressure, wood or pulp material was first swollen in cold 77% acid followed by hydrolysis steps in diluted acid solutions. Further, the neutralization of the hydrolyzate with dilute barium hydroxide was carried out in heated mother liquor ensuring a crystalline precipitate of barium sulfate. Digestion enables the separation of clear aliquots by decantation in large amounts for analysis by HPLC. The modified procedure allows hydrolyses of polysaccharides with low losses as indicated by correction factors between 1.07 and 1.1 for 5 sugars, i.e. glucose, xylose, mannose, galactose and arabinose.

**Key Words:** quantitative saccharification, acid hydrolysis, polysaccharides, wood, pulp, HPLC

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