

Acetosolv-pulp for specialty paper applications

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The Acetosolv-process is an alternative pulping process, utilizing acetic acid to dissolve lignin from biomass.^[1] It was heavily investigated in the last century, but ultimately abandoned in the 1990s due to the bad suitability of the produced pulp for graphical paper applications. In recent times however, the interest in the process has become invigorated with regards to its suitability for biorefinery concepts to obtain high-value lignins. In our work, we used a modified version of the Acetosolv-process to obtain a partially acetylated, anionic pulp, containing little remaining lignin. While in most of these biorefineries the cellulosic fraction is converted into low molecular feedstocks, like bioethanol, the produced Acetosolv pulp shows interesting properties, which may make it suitable for applications in the specialty paper sector. In this study, we present a modified Acetosolv-pulping process to produce lignin free, partly acetylated and anionic fibers and their possible applications for the production of 100% cellulose based, recyclable barrier papers.

[1] G. Wegener, *Ind. Crops Prod.* **1992**, *1*, 113–117.

[2] C. Marks, J. Viell, *Biomass Convers. Biorefinery* **2023**, *13*, 11687–11701.