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Optimization of Dithionite Bleaching of High Yield Bagasse Pulp

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Abstract

High yield bagasse pulp was prepared by soaking bagasse in 10 % cold sodium hydroxide for 24 hours and then refluxing for two hours at 95°C. Optimization of dithionite bleaching was attained by investigation of different parameters as consistency, temperature, time and pH. Effect of additives as chelating agent (EDTA) or stabilizing of bleaching solution (Zn compound & hexamethylene tetramine) was considered. The effect of air content was also studied. One and two stages bleaching of the pulp were investigated by using sodium dithionite (D) as a sole bleaching agent or after application of one stage bleaching by hydrogen peroxide to attain high brightness for high yield pulp.