INFLUENCE OF ACTIVE ALKALI CHARGE ON DELIGNIFICATON DEGREES AND DEPOLYMERIZATION IN COOKING PROCESS USING KRAFT PULPING METHOD

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Abstract

Delignification and depolymerization are the great concerns in the cooking process. This research used manihot esculenta crants, eucalyptus and acacia mangium with active alkali charge of 16% to 20% and 1% variation. Active alkali charge influences degree of delignification and degree of polymerization. Every 1% AA charge increase could increase the degree of delignification in manihot esculenta crants, eucalyptus and acacia mangium of 1.15%, 0.40% and 0.85% respectively. Every 1% AA charge increase could decerase degree of polymerization in manihot esculenta crants, eucalyptus and acacia mangium of 4.14%, 3.32% and 7.04% respectively. The correlations between the degree of delignification and the degree of polymerization in the manihot esculenta crants, eucalyptus and acacia mangium were $y_{(m)}$ = -58,284x + 6392,8, $y_{(e)}$ = -119,74x + 12135 and $y_{(a)}$ = - 149.63x + 14716 respectively.

Keywords: *Cooking process*, *active alkali charge, delignification, degree of delignification, degree of polymerization*.