

Characterization of oil palm leaf paper with starch as binder

ABSTRACT

The utilization of agro-based fibre in replacing the wood fibre for pulp and paper making has been the subject of interest due to the abundance of this agro-based fibre as well as to reduce the usage of wood pulp. The presence of cellulose and hemicellulose in acceptable amount for pulp paper makes this agro based fibre an alternative in paper making industry. Previous study has shown that oil palm leaf fibre can be moulded into paper sheet without any binding agent, however, the physical properties of the paper were very low compare to other non-wood paper. In this study, the oil palm leaf paper was prepared using 5,8,11 and 14% sodium hydroxide (NaOH) with the addition of 5% starch as the binding agent. The incorporation of starch increases the smoothness of the paper. The tear strength of the paper increases with increasing concentration of sodium hydroxide. At higher concentration of sodium hydroxide, the paper tear index falls within the range of commercial paper tear index. This study proves that the oil palm leaf has the potential to be developed in paper making industry.