

**PROPERTIES OF PAPER FROM OIL PALM FROND (OPF) BY USING SODA
PULPING PROCESS**

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ABSTRACT

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The paper and paperboard industry in Malaysia grew from 1.6% to 35% from 1993 to 2000. The growth highlights the potential of using the 26.2 million tonnes of oil palm frond (OPF) for pulp and paper production. The research has indicated that the chemical composition of OPF fibers lie between that of hardwoods and that of straws and grasses. OPF fibers can easily be pulped using the chemical process, producing pulp and paper of better properties than most hardwoods pulps. This research also highlights the beating effect in terms of the fiber morphology, paper strength and properties. A P.F.I Mill used to beat the OPF pulps. The beaten pulp was made into fiber network for morphological measurements and the stocks were tested for freeness and drainage time. Handsheets were made from pulp samples taken at different times during the beating process and standard physical test were carried out to give refining curves. The fiber length and diameter decrease with the degree of beating cause of the fragmentation. The soda pulp also gives the effect on drainage time which is increasing with the degree of beating. The content stock freeness (CSF) is decrease with the degree of beating cause of increasing the surface area to absorb water of fine fiber. The high degrees of beating give

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