

## EFFECT OF MATURITY ON FUNDAMENTAL PROPERTIES OF NETTLE FIBERS

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### ABSTRACT

*The work deals with the impact of plant maturity fineness, moisture content, tenacity and breaking elongation of mechanically separated nettle fiber. Three to five months old plants are harvested for analysis. It is found that fourteenth to sixteenth weeks old nettle stem gave optimum values fundamental nettle fiber properties. In this regard, moisture content of 12.5%, fineness of 1.0 Tex to 1.2 Tex as well as a dry tenacity of 5cN/Tex to 7cN/Tex at a breaking extension of 2.1% to 2.3% is obtained. Development of cellulosic and lignin ingredients in the fiber as time elapsed affects the above properties. Finally, it has been suggested that nettle fiber can be employed to develop various natural and organic products such as crop packages, super absorbent, fine, high tenacity and hygienic textile products. Besides, composite and paper industries can build up their own eco friendly products from nettle fiber.*

**KEYWORDS:** *Nettle Fiber, Retting, Cellulose, Tenacity & Fineness*

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