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EVALUATION OF PULP AND PAPER MAKING POTENTIALS OF *FICUS EXASPERATA* Vahl IN MAKURDI, NIGERIA

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ABSTRACT

The study evaluated the fibre morphology of *Ficus exasperata* stem. Wood samples of *Ficus exasperata* were collected from five (5) different trees varied in size ranging from 2.20m – 0.72m in diameter and growing in a scattered vegetation within the Federal University of Agriculture Makurdi. Three samples of the sapwood part of the stem were taken from the base, middle and top respectively. The representative samples were chipped and placed in an equal volume of glacial acetic acid and hydrogen peroxide in the ratio 1:1 for maceration and fibre features were measured with the aid of Reichert visopan microscope while derived fibre indices were calculated. Data were subjected to Analysis of variance (ANOVA). The result of the combined means of fibre length, fibre diameter, lumen width and cell wall thickness of *Ficus exasperata* samples range between 1.86mm – 1.20mm, 31.96µm – 20.98µm, 18.90µm – 10.42µm, 6.95µm – 3.76µm respectively. Results of combined means of felting rate, elasticity coefficient, rigidity coefficient, Runkel ratio and F factor ranged between 94.71 – 44.56, 60.97% - 49.11%, 25.45% - 19.52%, 1.09 – 0.75, 560.32 – 243.56 respectively. In conclusion, *Ficus exasperata* demonstrates suitability in pulp and papermaking and it was observed that the younger the age of *Ficus exasperata* the higher the suitability for pulp and papermaking due to their appreciable fibre length and Runkel ratio.