***Gnidia glauca* wood as material for pulp production in mount oku region, northwest Cameroon**

M. C. Momo Solefack1, M. L. Avana Tientcheu2 and H. Beeckman3

*1 Laboratory of Applied Botany, University of Dschang, Cameroon*

*2 Department of Forestry, University of Dschang, Cameroon*

*3 Laboratory of Wood Biology, RMCA, Belgium*

**Corresponding author:** mcarofr@yahoo.fr

**Keywords:** bark, fiber, *Gnidia glauca*, paper

Over the centuries, paper has been made from a wide variety of materials. Today, fiber comes mainly from two sources: wood and recycled paper product. *Gnidia glauca* (Thymelaeaceae) bark was used in neighbouring Oku for local paper production. The properties of wood and bark of *G. glauca* have never been explored in the literature. Therefore, in this study, the morphological properties were investigated to evaluate the potential utilization of this species especially in pulp and paper production. Sections (transversal, tangential and radial) with a thickness of about 15-30µm were obtained from eight samples and contains phloem, cambial zone and secondary xylem. The sections were stained with 0.1% safranin O. Densities of vessels, cambial zone thickness, fiber wall thickness, fiber length were measured in bright-field microscopy images using AnalySIS Pro 3.2 software. The results show that our species contain short wood fiber (1.32mm in average) while the fiber bark are longer. Gnidia wood fibers are the longest among Ailanthus altissima trunk fiber, wheat straw, canola stalks, cotton stalks and Aspen. Fiber diameter of bark is about twice of those of common papermaking and lumen width is the smallest. Cell wall thickness of *G. glauca* fiber bark is thicker than those of *G. glauca* wood and non-wood fibers; consequently, the Runkel ratio is highest (7.35). the flexibility coefficient of *G. glauca* xylem fibers is 54.51, so it is included in the elastic fibers group while phloem fibers is 12.15 and it is included in the highly rigid fiber.