

**Title of Article:** In vitro and in vivo antioxidant activities of the leaves of *Chrysophyllum albidum*

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### **Abstract**

*Chrysophyllum albidum* G. Don. (Sapotaceae) which is distributed in Nigeria is used for the treatment of yellow fever, malaria, diarrhea, vaginal disorders, etc [1]. The study was aimed at investigating the antioxidant properties using *in vitro* and *in vivo* models. The effect of 1,1-diphenyl-2-picrylhydrazyl (DPPH) antiradical activity on ethanol, petroleum ether, ethylacetate, butanol, and water fractions of *C. albidum* was determined. The ethylacetate fraction was purified in column chromatography which led to the isolation and characterization of a myricetin rhamnoside [2]. The structure was elucidated by NMR and mass spectroscopic techniques. Furthermore, ethanol extract was administered to five groups of eight rats per group. The positive control animals were administered with vehicle on the first four days, and with the vehicle and CCl<sub>4</sub> on the fifth, sixth and seventh day [3]. The animals in the treatment category were respectively administered (by gastric intubation) with 500, 1000 and 1500mg/kg bw of extract & distilled water for the first four days, and with distilled water, extract and CCl<sub>4</sub> on the last three days. Animals were anaesthetized and blood samples were collected for some antioxidant assays. Petroleum ether fraction showed the least antiradical activity (4057.5±809.6g/kg) while ethyl ether fraction exhibited the highest activity (414.4±92.0g/kg). Myricetin rhamnoside also exhibited an excellent radical scavenging activity (314.1±60.2). *C. albidum* exhibited significant (p<0.05) differences on the activity of malondialdehyde, catalase, and reduced glutathione. The plant therefore possesses antioxidant activities and could be employed as natural antioxidant boosters.