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**Fishmeal replacement with *Spirulina Platensis* and *Chlorella Vulgaris* in African catfish
(*Clarias Gariepinus*) diet: Effect on antioxidant enzyme activities and haematological
parameters**

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Abstract

This study explored fishmeal replacement with two freshwater microalgae: *Spirulina Platensis* and *Chlorella Vulgaris* in African catfish (*Clarias Gariepinus*) diet. The effect of inclusion of the two microalgae on biomarkers of oxidative stress, haematological parameters, enzyme activities and growth performance were investigated. The juvenile fish were given 3 distinct treatments with isonitrogenous (35.01-36.57%) and isoenergetic (417.24 - 422.27 Kcal 100 g⁻¹) diets containing 50% *S. Platensis* (50SP), 75% *S. Platensis* (75SP), 50% *C. Vulgaris* (50CL), 75% *C. Vulgaris* (75CL) and 100% fishmeal (100% FM) was used as the control diet. The result shows that all the diets substituted with both *S. Platensis*, and *C. Vulgaris* boosted the growth performance based on specific growth rate (SGR) and body weight gain (BDWG) when compared with the control diet. The feed conversion ratio (FCR) and protein efficiency ratio (PER) was significantly influenced by all the supplementations. The haematological analysis of the fish shows a significant increase

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