**PRODUCTION AND PROXIMATE ANALYSIS OF OKPEI (*Prosopis africana*) SEED CONDIMENT**

\*Yinka D. Oluwafemi1, Olorunjuwon O. Bello1, Titi A.Oshin1, Temitope C. Ekundayo1, Isaac A. Adesina1 Adebisi M. Tiamiyu1 and Magnus Michael C. Anyakudo2

*1Department of Biological Sciences, University of Medical Sciences, Ondo State, Nigeria*

***2****Department of Physiology, University of Medical Sciences, Ondo City, Nigeria*

E-mail of corresponding author: yoluwafemi@unimed.edu.ng

The production and evaluation of Ogiri-okpei (*Prosopis africana*) seed condiment were studied. The cooked cotyledons were wrapped in small portions (30g) with blanched plantain leaves. The wrapped samples were fermented in a container for 1–5 days. Enumeration and identification of microorganisms in Ogiri-okpei sample was carried out employing standard methods. The effects of fermentation time on the proximate composition and mineral content of Ogiri-okpei sample were also evaluated. The phytochemicals and nutritional quality of Ogiri-okpei *(Prosopis africana*) sample were determined. Bacterial isolates were identified as *Bacillus* species, *Micrococcus* species*, Lactobacillus* species and *Staphylococcus aureus*. Comparison of proximate composition of unfermented Ogiri-okpei with five day fermented Ogiri- okpei sample had the following: Moisture (3.72% and 21.98%), Ash (6.33% and 3.3%), Fat (19.08% and 20.34%), Fibre (11.31% and 8.24%), Protein (30.32% and 34.12%) and Carbohydrate (29.35% and 12.06%) respectively. The unfermented samples Ogiri-okpei sample had lowest amounts of Calcium, Magnesium, Phosphorus, Sodium and Potassium while the highest was observed in fermented samples after fermentation. Fermentation time significantly decreased Carbohydrate, Ash and Fibre but increased Fat, Moisture and Protein. Alkaloids, Steroids, Flavonoids, Resins and Phenols were present. Saponin content was very high compared to other phytochemicals. Generally, it showed that okpei sample possess immense microbiological and nutritional benefits.

**Keywords:** Ogiri-okpei seed, phytochemicals, fermentation bacteria, fungi.