

PRODUCTION AND EVALUATION OF SAUCES FROM *TRECVLIA AFRICANA* AND *PARKIA BIGLOBOSA*

Adegede, G.O. and Ani, J. C.

Department of Food Science and Technology
University of Nigeria, Nsukka. Enugu State

INTRODUCTION

Sauce is a liquid or sometimes semi-solid food served on or used in preparing other foods. They are not consumed by themselves; they add flavor, moisture and visual appeal to another dish. In South Eastern Asia, soy sauce, a fermented soybean product is a popular product among others. In Northern Nigeria 'dawadawa' is extensively used as seasoning for soups. Condiments are basic ingredients for food supplementation and their socio-economic importance cannot be over emphasized in many countries especially in Africa and Asia where protein calorie malnutrition is a major problem. *Treculia africana*, commonly known as African Breadfruit is a leguminous plant with large fruit heads. Its seed, commonly called 'afon' and 'ukwa' by the Yorubas and Igbos of Nigeria respectively, is popular as a traditional food item. The seed is commonly roasted, cooked, mashed and consumed either directly as snack food or as flour for use in soup thickening and cakes [1]. However, there is a need to diversify the use of the seeds for food, other than the traditional ones; this is one of the objectives of this study.

Parkia biglobosa is a very small but widely spread member of the *leguminosae* family

In West Africa, the seeds are called 'African locust beans'. They are extremely hard and practically inedible when raw but can be processed and fermented into a paste-like product called 'dadawa', rich in fat, protein and lysine. It contributes also to the protein essential amino acids, B-vitamins, particularly riboflavin [2]. Fermented African locust bean condiment is used in families as a low cost meat substitute.

MATERIALS AND METHODS

Treculia Africana and *Parkia biglobosa* seeds were bought from Orie market, Enugu State and Micro-organisms were collected from the United State Department of Agriculture. Sauces were prepared according to the method described by Yong and Wood for soy sauce production [3]. Proximate compositions (moisture, Protein, Fat, Ash, and Carbohydrate Fiber) was determined by AOAC method [4]. Carbohydrate was calculated by difference.

RESULTS AND DISCUSSION

Table 1 represents the chemical composition of Soybean, African locust bean and African breadfruit seeds, that were used in production of their respective sauces. Table 2 shows the chemical composition of Sauces made from Soybean, African locust bean and African breadfruit seeds. The moisture content of the sauces is relatively high, ranging from 74.5% to 81.5%. The protein contents were high, though that of Soy sauce (5.20%) was significantly higher than that of the other 2 sauces (2.62-3.50%). The fat values for all sauces were relatively low (0.10-1.15%).

Table 1: Proximate Composition of Soybean, African Locust Bean and African Breadfruit seeds

Nutrients	SB	ALB	ABF
Moisture	8.50	8.70	9.60
Protein	35.60	32.40	16.71
Fat	18.10	17.03	13.70
Crude fiber	9.30	11.7	0.88
Ash	5.01	5.40	2.50
Carbohydrate	23.49	24.77	56.61

Key: SB= Soybean, ALB= African Locust bean seed, ABF= African Breadfruit seed.

Table 2: Values of Proximate Composition of Soy, African Locust bean and African Breadfruit Sauces

Nutrients	SS	LB	BF
Moisture	71.10	83.65	80.10
Protein	5.20	2.62	3.50
Fat	0.10	0.15	1.15
Crude fiber	8.5	Trace	Trace
Ash	3.21	5.15	6.12
Carbohydrate	11.89	8.43	9.13
Glucose	2.00	0.86	1.31
	4.7	4.11	3.78

Values are means of triplicate determinations.

Key: SS=Soy Sauce; LB=African Locust bean Sauce; BF=African Breadfruit Sauce.

REFERENCES

1. Akubor, P.I., Isolokwu, P.C, Ugbane, O. and Onimawo, I.A., (2000). Proximate composition and functional properties of African breadfruit kernel and wheat flour blends. Food Research International
2. Odunfa, S.A. (1985b) African fermented foods In: Microbiology of Fermented foods. Vol. 1 ed. B.J.B. Wood. Elsevier. Applied Science. Pp 155-191
3. Yong, F.M and Wood, B. J.B (1974) Microbiology and Biochemistry of Soy Sauce Fermentation. In: Applied Microbiology. Vol. 17 Ed. D. Perlman. Academic Press, New York and London. Pp 157-194
4. AOAC. (1995) Official Methods of Analysis (15th). Association of Official Analytical Chemists. Arlington, VA: Association of Analytical Chemists