

Quality Evaluation and Anti Nutrient of A Culinary Tourism From Ibaji Local Government Area of Kogi State

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Abstract

A culinary dish of Ibaji local government area of Kogi State was prepared and subjected to evaluation for its protein, moisture, ash content, some minerals, some vitamins (A,C,E,K,B₁, B₂, B₃,B₁₂,B₆, and B₉) and anti nutrient properties of the dish. The result revealed that moisture and ash content ranges from 77.58 (0.005) and 1.99 (0.002), fats and fibre content ranges from 0.82 (0.004) and 0.65(0.002), protein and carbohydrate ranges from 2.26 (0.036) and 16.73 (0.07) respectively. Sodium, calcium, magnesium, potassium, iron, phosphorous and zinc ranges from 0.33 (0.003), 0.27 (0.002), 0.36 (0.002) 0.42 (0.004), 3.99 (0.003), 0.56, (0.004) and 1.33 (0.001) respectively. The vitamin content of the dish with mean and standard deviation values of 0.27 (0.003 Vit.C), 0.24 (0.009 Vit.D) 0.32 (0.066Vit.E), 0.22 (0.008 Vit.K), 0.78 (0.007 Vit.A), 0.55(0.007 Vit.B₁) 0.24 (0.009 Vit.B₂), 0.24(0.005 Vit.B₃), 0.16(0.005 Vit.B₁₂), 0.66(0.004 Vit. B₆), and 0.22(0.007 Vit.B₉) respectively. Whereas the rang values of the anti-nutrient present in the dish on the other hand are phyhate, oxalate, hemaglutinin and trypsin inhibitor: 1.33 (0.003), 0.396 (0.002), 0.55(0.004) and 0.67 (0.006) respectively. The base line data recorded in this dish would undoubtedly, serve not only as a guide but detailed documentation of indigenous dish of Ibaji tribe of Kogi-State Nigeria.

Keywords: Gourmet, quality evaluation, culinary tourism, gastronomy and cuisine.

1. Introduction

Nigeria is a nation with ethnically and culturally diverse food consumption patterns in the different agro ecological zones. The diet of the people is based on the foods produced or marketed in the different zones, Onabanji and Omika(2010).A recent study by(Akinyele,2007) urbanization however has created changes in food consumption pattern with more processed foods being available in cities. On the other hand, traditionally prepared Nigerian dish has no standard recipe procedure for the preparation and cooking, hence there is no good presentation and complementation of these indigenous foods, Olaibi(2010). The emphases is that there was thus an increasing need for more complete, accurate, reliable data on the nutrient contents and national values of foods taken as meals,(Akinyele,2007).As investigated by(Greenfield and Southgate,2003) that the significance of food and nutrient composition as essential in terms of qualitative study of human nutrition and is stressed that food composition are used primarily for the assessment and planning of human energy and nutrient intakes.

Food is viewed as any chemical substance, either liquid or solid which when eaten or taken in is digested and adsorbed in to the body to produced energy, promote growth and development, maintain and regulate the body system, Osisanya (2015). It is follows that any food should contain at least one nutrient that can fulfill all the functions of food mentioned above while glucose is compose entirely of single function. Getz, There is an opinion that food is anything nutritious that people eat Getz,Andersson and Vujicic(2014) . What exactly people eat, and how they prepare their food, involves cultural and social studies and for those with sufficient money and time, food, cooking and dinning become part of one's life style, giving rise to the terms 'food lover' and 'foodie', and that food tourism or culinary tourism is a luxury, but it is an important one that people gladly embrace when they gain sufficient discretionary income to support their interests. That is travelling for specific purpose of enjoying food experiences,Getz,Anderssson and Vujicic(2014).

Further more Karim and chi (2010, p, 532) said "Tourism activity related to food has been labeled such as food tourism, culinary tourism, or gastronomy tourism are the same terms and have the same meaning. People travel to a specifics destination for the purpose of finding food. Since food is viewed as anything nutritious, Osisanya (2015) say's food has three attributes: chemical, which comprises of nutrients, anti-nutrients and enzyme, physical which comprises of edible portion and non-edible parts of food. And the third organoleptic, which includes taste, aroma, colour, texture, flavour and overall acceptability of the food, or dish. Further,it was stressed that food nutrients are chemical components that makes it to perform its function which are required by the body for the growth repair and maintenance of the tissues which if not present result into defined clinical conditions or syndromes rectified when they are present in the diet,Osisanya(2015).

1.1 Gastronomy and cuisine.

Unfortunately; Getz,Andersson,andVujicic (2014) sees gastronomy and the related terms gourmet or gourmand (frequently value-laden in usage) as imply a lavish or elitist perspective on food preparation and dining. Hornby (2010) defines it as 'fine' or 'good food ' which is certainly open to interpretation, and regard the 'gourmand' as

given to excessive eating:

Gastronomy- the art or activity of cooking and eating fine food,.

Gourmet- a person who enjoys and knows a lot about good food and wine.

Gourmand- a person who loves to eat and drink too much.

Culture and style enter the picture when we speak of cuisine and culinary tourism. Cuisine is highlighted as a manifestation of culture”(Nwokorie,2010:p.21) and Getz,Andersson andVujicic (2014) sees it as a specific set of cooking traditions and practices, often associated with a specific culture, which often named after the region or place where its under limiting culture is present .Various definition of culinary tourism have emerged in recent times and mckercher, Okumus and Okumus (2008) it is defines as experiencing the food of a country, region or area which is considered as a vital component of the tourism experience,Mckercher,Okumus and okumus(2008).While others opened it as “the pursuit of unique and memorable eating and drinking experiences,UNWTO(2012).

As vied by Wolf (2006) it is “any tourism experience in which one learns about, appreciates, or consumes branded local culinary resources. In other words, culinary tourism is an intentional and reflective encounter with any culture, including one’s own through culinary resources. A recent study view it as travel specifically motivated by culinary interest as well as travel in which culinary experience occur but are not the primary motivation for the trip(Smith and Xiao,2008:p.289).

An investigation byWolf (2006) implies that culinary tourism is motivated by a desire for unique dining experience, whereas a study conducted by Smith and Xiao’s (2008) approach also encompasses food experience while travelling for other purposes.

Gastronomy, since the early 18th century opined by Getz,Andersson and Vujicic (2014) “has dominated the study of the relationship between culture,food and various cultural components of food. Brillat_ Savarin (2000) and Grimod de la Reyniere (1803-1812, 2003) were pivotal in establishing gastronomy as an interdisciplinary topic that included the study of discovering , tasting , experiencing, researching, understand and writing about foods. In Gale Encyclopedia of food and culture (2004) “most dictionaries define gastronomy as “the art and science of good eating,” or “the art and science of fine eating”. “ The etymology of the word is generally attributed to the title of a poem by French attorney Joseph Berchoux, “ Gastronomie” (1801). Early descriptive writings often assume gluttony. Croce and Perri(2010) give gastronomies in case studies of ‘best practice” as experiences including a winery tour, dairy farm, brewery, olive mill and distillery , plus example connected to rice ,bread , cured meat , balsamic vinegar ,foie gras, salmon, pasta, snails, salt, fruit, chocolate, cocoa and tea. Boniface (2003p151) discussed honey, meat, fish, cheese, apples and cider as tourist attractions with regard to various foods and drinks. “They reveal how much custom, belief, ritual and tradition can be held and conveyed in a food during its process of production and method of preparation. “ Basically, anything that is eaten or drunk can be packaged as an experience at the site of production, manufacture or distribution.

1.2 Statement of the Problem.

Although, some researchers have reported values on the proximate and certain micronutrients such as iron,zinc,copper Ene-Obong and Madukwe,(2001) including an anti-nutrient , phytate for dishes served traditionally at home but not all dishes from south east kogi- state. The lack of understanding of nutritional composition of certain dishes makes it difficult for those within and outside the locality to consume the meal.

1.3 Objective of the study

This study was designed therefore to determine proximate, some vitamins, minerals’ and antinutrient content of the (oje igbale) dish from Ibaji local government area of kogi-state Nigeria.

2.0 Materials and methods

Source of material: raw brown rice was purchased from a local village rice farm at Ota in Ibaji local government area of kogi-state.

2.1 Methods

Raw brown rice was purchased and de-husk manually with mortar and pestle. It was winnowed; removing the skin, dirt and sundry raw rice was milled into flour, 25g of the raw rice was flour was place into a cooling pot; 500mls of water was brought to boil. To the 25 flour in the pot 100ml of cold water was added to form a past. 200ml of the boiled water was added and put on the burner to simmer turning frequently to prevent excessive burning till it cooked. The rest 75g raw rice flour is then added and more rice water is added. It is allowed to cook for another 30minites turning frequently and adding the rest of the boiled water gradually till it is absorbed by the paste. Serve with mixed vegetable in dry /fresh fish sauce or any sauce of your choice. This yield 400g (adult dose).

2.2 Chemical and physical Evaluation:

The chemical composition were determined using the standard procedure of official analytical chemist (AOAC,1995) . the micro kjedahl technique for protein (NX6.25), moisture (hot air oven at 105^oc and drying to constant weight) ash was determined by heating the samples in a multiple furnace at 600^oc for two hours , fat by means of soxhlet extraction method . Crude fibre was determined by heating the sample with acid and alkaline, carbohydrate was determined by difference.

The vitamin and mineral were determined using the atomic absorption spectrophotometer. The anti nutrient was determined by high performance liquid chromatography (HPLC).

2.3 Data analysis:

The data from chemical analysis were analyzed using mean and standard deviation (mean STD of 3 determinations).

3.0 Results and Discussion.

Table 1 Mean value and standard deviation of proximate properties of the dish

Protein	Moisture	Fats	Ash	Fibre	Carbonhydrate
2.256(0.036)	77.58(0.005)	0.824(0.004)	1.99(0.002)	0.652(0.002)	16.728(0.065)

Table1 shows the mean /percentage (%) value and standard deviation of proximate composition of the dish showed that moisture, ash ,fats,fibre, protein and carbohydrate 77.58(0.011), 1.99(0.002), 0.82(0.004),0.65(0.002), 2.26(0.04) and 16.73(0.07) per 100g of edible proteins respectively.

Table 2 Mean value and standard deviation of the vitamin properties of the dish

Vit C	Vit D	Vit E	Vit K	Vit A	Vit B	Vit B ₂	Vit B ₃	Vit B ₁₂	Vit B ₆	Vit B ₉
0.274 (0.003)	0.237 (0.0090)	0.0315 (0.066)	0.218 (0.008)	0.784 (0.007)	0.553 (0.007)	0.236 (0.009)	0.237 (0.005)	0.155 (0.005)	0.664 (0.004)	0.215 (0.007)

Table 2 shows mean/percentage (%) value and of the standard deviation vitamin content of 100g of edible portions as vitamin C, vit. D, vit. E, vit. K, vit.A, vit.B1, vit.B₂, vit. B₃,vit. B₁₂, vit.B₆,andB₉,as 0.27 (0.003), 0.24 (0.009), 0.32 (0.066), 0.22 (0.008), 0.78(0.007), 0.55(0.007), 0.24 (0.009), 0.24(0.005), 0.16 (0.005), 0.66(0.004) and 0.22(0.007) respectively.

Table 3 Mean value and standard deviation of mineral properties of the dish

Sodium	Calcium	Magnesium	Potassium	Iron	Phosphorous	Zinc
0.334(0.003)	0.274(0.002)	0.357(0.002)	0.415(0.004)	3.896(0.003)	0.558(0.004)	1.332(0.001)

Table 3 shows some mineral content of the 100g per edible portion with mean/percentage(%) value and standard deviation of the dish as sodium, calcium, magnessium, potassium, iron, phosphoruous and zinc as 0.33(0.003), 0.27(0.002), 0.36(0.002), 0.42(0.004), 3.90(0.0030), 0.56(0.004), 1.33(0.001), respectively

Table 4 Mean value and standard deviation anti nutrient properties in the dish

Phytate	Oxalate	Hemaglutinin	Trypsininhibitor
1.334(0.003)	0.396(0.002)	0.545(0.004)	0.673(0.006)

Table 4 shows some anti nutrient properties present as phytate, oxalate, hemaglutinin and trypsin as 1.33 (0.003), 0.40(0.002), 0.55(0.004) and 0.67(0.006) per 100g of edible portion of the dish.

4.0 Conclusion

The study has shown that the dish have a good proximate and anti nutrient properties, for normal physiological function of the body. The vitamin and mineral content of the dish are also within the tolerable level. The dish is therefore, strongly recommended for consumers on a sustainable basics.

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