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PRODUCTION AND NUTRITIONAL ANALYSIS OF ITSEKIRI PEPPER SOUP SPICES

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ABSTRACT

The study was aimed at producing and analyzing the nutritional components of a typical It sekiri food seasoning (pepper soup spice). The following ingredients (1) Monodora Mystristica (Iwo), (2) Tetrapleura Tetreapera (Iyanghangangh), (3) Panirari Curatellifolia (Aghafilo), (4) Chrysobalanus Icaco and (5) Xylopia Ethiopica were bought, cleaned and ground, salt was also added to taste. Sample of the pepper soup spice (per 100g of sample) was analysed for its nutritional contents. Results indicated that the moisture content of the sample was found to be8.88, crude protein 9.29, crude fibre 26.80, crude fat 22.80, and ash 2.75. The concentrations of some metals- calcium (Ca), and phosphorus (K), were determined using Atomic Absorption Spectroscopy and the results revealed that these elements were present.

INTRODUCTION

Spices are often referred to as food accompaniments because of their ability to stimulate appetite and increase the flow of gastric juice.Spices not only just stimulate the taste buds but are composed of notable list of phyto-nutrients, essential oils, antioxidants, minerals and vitamins that are necessary for good health (Lingenfelter, 2011; Scott, 2012). The use of spices has been the tradition for many cultures since centuries, and now has become integral part of life. Although, spices are used in insignificant quantities, some researchers like Akpanyung (2005), acknowledge that they also contribute to the nutrientcontent of the food. A research work by Otunola, Oloyede, Oladiji and Afolayan, (2010), also confirms that most seasonings are sources of nutrients. Seasonings are ingredients which are added to foods to enhance their flavour. These ingredients include salt; herbs such as mint and thyme; spices such as chili powder and condiments such as mustard and vinegar. Apart from adding flavour to foods, some seasonings also contain medical and health benefits (Herndon, 2010). Some of these benefits have been extensively studied while the potential of many are yet to be explored. Garlic, for instance, contains antioxidants, which help protect cells from damage caused by free radicals and also help to slow down the growth of tumour cells (Herndom, 2010; Scott, 2012). The large quantities of sulphides present in garlic especially the bulb are antimicrobial and anti-inflammatory and therefore help to prevent or fight infectious diseases; as wellas lower the levels of bad cholesterol and triglycerides in the blood. Ginger on the other hand is known for its antibiotic, anti-inflammatory, anti-clotting, anti-diarrheal, anti-cancer and anti-depressant activities. It has been used as a decongestant and its consumption has led to reduction in bad cholesterol (Ajayi, Akomolafe and Akinyemi, 2013).

Thyme is an expectorant and has antiseptic actions; lowers cholesterol levels; and eliminates scalp itching and flaking caused by candidiasis (Lingenfelte, 2011). Turmeric is also being studied for its potential cancer-fighting and anti-inflammatory properties (Aukerman, 2007). Cayenne pepper acts as a catalyst for other herbs. It has antibacterial and antioxidant actions; it helps to ward off colds, sinus infections, and sore throats. Cayenne pepper helps to relieve arthritis and back pain. It burns calories since hot peppers in foods speed up metabolism (Lingenfelte, 2011). Other common examples of seasonings include cinnamon, curry, onion, cinnamon, rosemary, parsley and sesame seeds. These spices are ground and packaged. In Nigeria, seasonings are manufactured as bouillon cubes and other well packaged powdery forms with

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Table 1. Nutritional Composition of Pepper Soup Spice

SAMPLE	MOISTURE	CRUDE PROTEIN	CRUDE FIBRE	CRUDE FAT	ASH	Calcium	Phosphorus
Pepper soup spice	8.85	9.29	26.80	22.80	2.75	0.30	0.07

different brand names. They contain salt, monosodium glutamate (MSG), and some spices as indicated by the manufacturers and are used extensively in food preparation in most homes and restaurants (Nwinuka, Ibeh and Ekeke, 2005). Among the Itsekiri tribe in Nigeria, spices are used for soups especially for women who have just delivered. They are used to quicken the healing of the body processes. Such spices are produced locally by many households and used in generous amounts. The ingredients used in the production of the various seasonings sometimes depend on the preference of the producer or the health condition of the person. This study was carried out to produce and determine the nutritional composition of a typical pepper soup seasoning in Itsekiri land of Abia State.

Statement of the Problem

Local spices and food seasonings are popularly used in all parts of African. In Nigeria, they are used by almost every tribe, especially for women who have just delivered or put to bed. They are added to soups, stews, puddings and sometimes as stimulants which are mixed along with other beverages. Seasonings are becoming more popular with the movement and interactions of people from one part of the country to another. Thus, it has become needful to properly identify, evaluate, package and introduce these local seasonings and condiments to all locations. There is also the need to investigate their nutritional and health benefits in order to encourage their uses as seasonings in our daily recipes. This is the aim of this paper.

Design of the study

This study adopted the experimental design in order to produce and determine the nutritional composition of a typical pepper soup seasoning used popularly by the Itsekiri tribe in Abia State of Nigeria.

MATERIALS AND METHODS

This analysis was carried out by the Vet nary Research Institute Vom, in Plateau State and the details of the results are shown on table one.

RESULTS AND DISCUSSION

The results from the nutritional analysis of the pepper soup spice reveals that Moisture is 8.85%. This is an indication that their shelf-life may be elongated and deterioration in quality due to microbial activity may be limited. The crude protein content of the pepper soup spice is 9.29%. This value is comparable to those reported for spices such as *Monodoramyristica* and *Tetrapleuratetraptera* (Agomuo, Onyeike and Anosike, 2006), but lower than those reported for bouillon cubes (Akpanyung, 2005). The crude fibre is 26.80%, thisexceeded the fiber content of *Talinumtriangulare* (2.0%) and *Telfairiaoccidentalis* (1.7%). This indicates that the fiber (roughage) content of the spice was high and will promote digestion and prevent constipation when consume. The crude fat content of the pepper soup seasoning was 22.80%. This is comparable to values reported for traditional spice *Tetrapleuratetraptera* (Agomuo, Onyeike and Anosike, 2006) and *Scorodophleuszenkeri* fruit, a wild plant used as spice (Bouba, Njintang, Foyet, Scher, Montet and Mbofung, 2012), but lower than those reported for bouillon cubes (Akpanyung, 2005). The ash content was 2.75%, this value is low. Low ash content is an indication of low inorganic mineral content (Oloyede, 2005). The mineral analysis reveal the presence of the essential metals like calcium 0.30% and phosphorus 0.07%. This is acceptable because calcium and phosphorus plays important roles in a wide range of physiological processes in the body.

Conclusions

The present study has shown that the Itsekiri seasonings contain moderate amounts of fat, protein and fibre which are nutrients needed by the body. The results of the study also suggest that these local spices are good sources of minerals which help the metabolic processes within the body cells. The presence of these nutrients in the pepper soup spice can help to meet some the nutritional needs of individuals as well as enhance the flavor and taste of food.

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