ANTIBACTERIAL ACTIVITIES OF AQUEOUS EXTRACTS OF SOME SELECTED SPICES ON A GRAM NEGATIVE ORGANISM (*Pseudomonas aeruginosa*) ISOLATED FROM MEAT.

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INTRODUCTION: Plants have being serving both the purposes of food and medicine to man because of the presence of biotive compounds (Singgh et al., 2007).Spices known as plants which are used for flavouring of food, preservatin of food and medical value (deSouza, 2005; Dubey et al., 2012). Some spices consist of Rhizomes (ginger), Leaves (curry, bay, rosemary), Flower (clove), Bulb (onion and garlic), Fruit black pepper, red chilli, Stem (Cinnamon) and Seed (Nutmeg) (Arora and Kaur, 2009). Nutmeg which originated from Palau Ai with the Latin word nux muscatus meaning the musky nut. Is used in culinary and medicinal purposes. Curry (*Murraya koenigii*) is a deciduous shrub found in the tropics and subtropics of the world that is used in the seasoning of ready to-eat and non ready-to eat food while Rosemary (*Salvis /Rosamyrinus rosmarinus)* which is native to the hills along the Mediterranean, Portugal and NorthWestern Spain but due to the recent trend in green consumers have gained an increasing interest in the antimicrobial properties of the compounds of the plant.

Nutmeg (*Myristica fragrans*)

Curry (*Murraya koenigii*)

Rosemary (*Salvis /Rosamyrinus rosmarinus).*

MATERIALS AND METHODS: The spices were bought from the local market identified by a botanist. 100g of each spice were weighed with a weight balance and soaked with 500ml of aqueous for 24 hours and was followed by repeated filtration using sterile muslin clothe, non-absorbent cotton wool and Whatman No. 1 filter paper.).Antibacterial Sensitivity Testing was carried out using well in agar technique Determination of Minimum Inhibition Concentration (MIC) was also carried out using agar-well techniques. Media plates containing varying concentrations of 62.5 -500mg/ml of the extracts were incubated at 37° C for 24 hours. The lowest concentration of the various extracts causing complete inhibition of the bacterial was taken as the minimum inhibitory concentration (MIC) (Hero and Akra, 2014).

RESULT

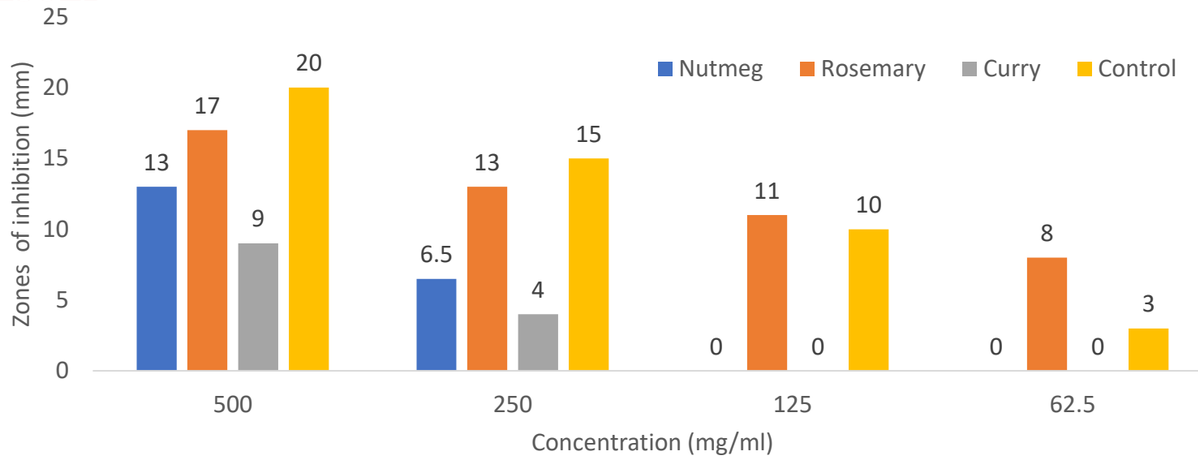

Figure 1: Antimicrobial activity of the aqueous extracts of the spices on the bacterial isolate.

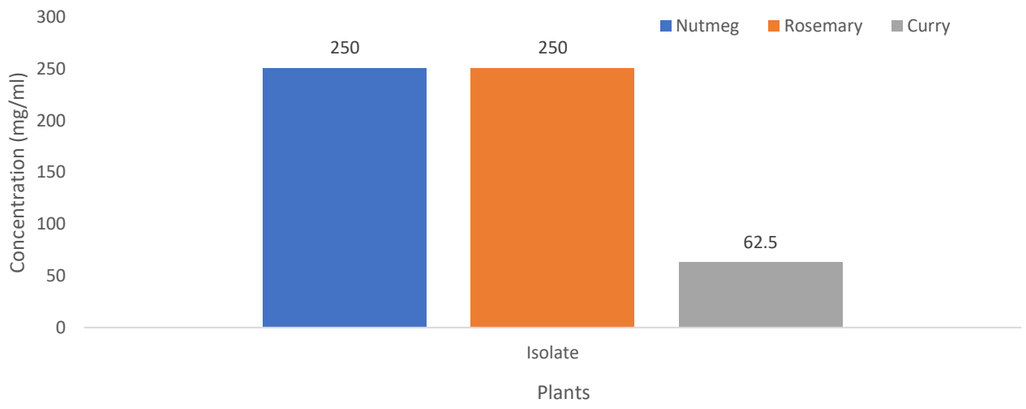

Figure 2: Minimum inhibitory concentration of the plants

DISCUSSION: The three plants worked with posses antibacterial activities which made them to inhibit the tested organism in various degrees . This study corresponded with Ertuk, 2006 who worked with same plants on some of the bacterial isolate which *Pseudomonas aeruginosa* was among. Rosemary extract had the highest antibacterial effect followed by Nutmeg and Curry which also aligned with Hero and Akra , 2014. Nutmeg posses essential oils of trimyristin and other volatile oils of elemicin and myristicin. Rosemary contains Romarinic acid, Ursolic acid, Betulinic and Caffeic acid and these compounds can be responsible for their antimicrobial activity. MIC showed that Rosemary has 62.5mg/ml which agreed with the work done by Singh et al., 2007; Dubey et al., 2012 and Hussein et al., 2014.)

CONCLUSION: Plants can serve as food, medicine and as spice. Nutmeg, Rosemary, and Curry have antibacterial activities and the three plants can be used in the preservation of meat to avoid bacterial spoilage

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