

MICROORGANISMS ASSOCIATED WITH THE FERMENTATION OF INDIGENOUS FERMENTED FOODS

Indigenous fermented foods have played very important role in the overall dietary needs of Nigerians. Some like garri; fermented cassava food has been a simple food and others like ogi a fermented maize food, has been used as weaning food, and is also popular with adults. Some others have been consume as such or mixed with other ingredients as salad or condiment to flavor soup. The production of manly Nigerian fermented foods is still largely based on the traditional family art which depends on the traditional "wild" fermentation. As a result of such "chance inoculation fermentation" some of the fermented products have variable characteristics in terms of flavor aroma and texture. The research focused attention on the biochemical nutritional and microbiological studies made on such fermented products and efforts made to improve them.

OGIRI (Fermented Melon Seeds)

This is a moist-semi-solid paste made by the fermentation of either melon or castor been seeds. Melon seeds (*Citrullus vulgaris*) also known locally as egusi constitutes one of the most important sources of protein particularly in the diets of the southern parts of Nigerian. Melon seeds are used in the preparation of the popular egusi soup, and in the preparation of igbalo or irolbo or they may be wrapped in banana or plantain leaves, boiled and fermented to produce ogiri which is used as a flavoring agent in soups. *Bacillus* sp. *Staphylococcus* sp. And *Alcaligene* sp were isolated from fermented melon seeds. The use of pure isolates to ferment the seeds showed that only a combination of *Bacillus* sp and *Alcaligene* sp could ferment the seeds. There were increases in pH with corresponding increase in titrateable acidity during the fermentation of melon seeds. Sucrose and galactose were the predominant sugars in the unfermented melon seeds. Fermentation decreased the total disaccharides and increased the total monosaccharaides composition made up of mostly fructose and galactose. The crude protein content of melon seeds increased from 31.54% to 33.04% during fermentation and fermentation increased the soluble Nitrogen and soluble solids of melon seeds.

Analysis of amino acid composition showed that melon seeds had amino acid composition similar to that of isolated soya bean protein except that it is lower inn lysine content. Melon seed was also high in unsaturated fatty acids which formed about 69% of the total oil. Fermentation had no effect on the amino acid and fatty acid composition of the seeds. Fermentation significantly increased the content of riboflavin and thiamin but had no effect on the niacin content of melon seeds