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## Phytoestrogen compounds from soybean germ

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Phytoestrogen, existing in some plants such as soybean, red clover, kudzu but the highest content is seen in soybean. Soybean germ is a byproduct of technological process of soybean powder preparation. Soybean germ is about 2% of total soybean mass but the content of phytoestrogen in soybean germ is 85 to 90% comparing with the content of phytoestrogen in total soybean. The phytoestrogen in soybean germ are mostly isoflavone (genistein, daidzein and glycitein) and their derivatives in the glycoside, malonyl and acetyl form. In addition of having biological activities of flavonoids such as antioxidant activity, atherosclerosis prevention, increased permeability of the cell, anti-microorganism activity; these compounds have weak estrogenic activity. They can regulate female hormone and prevent breast cancer, prostate cancer, osteoporosis, cardiovascular diseases and menopausal symptoms in women. Our research focus is on obtaining the phytoestrogen from soybean germ to product the capsule containing 20 to 25 mg of phytoestrogen per one. The woman can consume two capsules per day to regulate the hormone and anti-aging or consume 4 capsules per day to support the treatment of diseases. The methods to increase the content of phytoestrogen in soybean germ and the methods to extract and purified the phytoestrogens from soybean germ are the key technological solutions. These researches are cooperated between HUST, Vinanuso Company and National Institute of Pharmacy.

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## Characterization and technological properties of yeasts isolated from retting cassava

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Yeasts are eukaryotic microorganisms known to exhibit different technological and physiological properties which also define their various uses as well as their application in fermentation processes. Four samples of retted cassava were obtained from different locations in Ibadan. Different techniques were used in the characterization of the isolates which includes, macroscopic, microscopic and sugar fermentation. The isolates were screened for different technological properties such as enzyme production acid production from glucose, protein content. A total of eighteen strains were isolated from spontaneously fermenting cassava, they include; *Saccharomyces cerevisiae*, had the highest frequency of occurrence (44%) while *Candida krusei* (22%), *Candida parapsilosis* (17%) and *Candida tropicalis* (17%) were less dominant. Most isolates produced acid from glucose. None of the isolates grew in 1% acetic acid. *Saccharomyces cerevisiae* RC3 had the highest crude protein. All isolates were able to hydrolyze starch during amylase production; few isolates produced protease; which includes *S. cerevisiae* RC1, RC3, RC6, RC9 and RC13 and *Candida tropicalis* RC7. Few isolates were able to produce lipase; which include *Candida parapsilosis* RC5 and RC14. This research has shown that traditional fermented cassava contains yeast with variable characteristics. The yeasts obtained in this study have been observed to possess some technological potential such as enzyme synthesis, acid production, protein content and susceptibility to antimicrobials (fluconazole and nystatin).

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