## conferenceseries.com

2<sup>nd</sup> International Conference on

## Food & Beverage Packaging

June 13-14, 2016 Rome, Italy

## Water vapor properties of edible packaging based on native starches from improved cassava varieties in Côte d'Ivoire

Adjouman Yao Desire

Universite de Liège Gembloux Agro-Bio Tech, Belgium

A study in Côte d'Ivoire entitled "artisanal and industrial valorization of native cassava (*Manihot esculenta* Crantz) and yam (*Dioscorea spp*)" starches showed that the film produced with 4% starch cassava and 5% vegetable oil showed the most promising coatings capabilities. This film was designed without plasticizer and showed mechanical limits. So, the presence of plasticizer could overcome the fragility of the film, with a commonly used slurry of 15-40/g of glycerol in 100 g of starch. The properties of starch films can be further improved by producing composite films with incorporation of functional additives. Thus, in this present study, starch-based films have been strengthened with addition of a plasticizer (glycerol), an emulsifier (soy lecithin) and a preservative (potassium sorbate). These mixture led to produce biodegradable edible packaging based on native starches extracted from improved cassava varieties in Côte d'Ivoire. This study is currently carried out at the University of Liege, Gembloux Agro-Bio Tech laboratory Quality and Product Safety Agro-Food. The optical, mechanical and water vapor barrier properties of the starch-based films containing 4% to 5% vegetable oil, glycerol (0, 15, and 25%), soybean lecithin (0 to 5%) and potassium sorbate (0 to 2 g) are investigated. The effectiveness of the optimal formulation for uses as coating of raw food crops (cassava roots, fruits and vegetables) and production of biodegradable packaging will be studied.

## **Biography**

Adjournan Yao Desire is a 3<sup>rd</sup> year PhD student and currently he is at the University of Liège Gembloux Agro-Bio Tech to complete his research and to complete his thesis at laboratory of Quality, Security products Agro-Food of the said University. He has completed his Masters in Science and Technologies of Food Biochemistry and Food Technology option.

desyadjouman@yahoo.fr

Notes: