Characterisation of yam tubers and starch substances for food quality and industrial applications

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ABSTRACT

- selection of the raw material and agreement with IITA
- development of new methods and modificiation of existing methods
- proximal charcaterization : moisture content, titratable acidity, pH, minerals in the flours (P,K,Ca,Zn,Cr,Pb,Se) and phosphorus in starches, free amino acids in flours, soluble sugars, IP6 phytates;
- rheological characterization of raw and cooked pulps using uniaxial texturometer by relaxation;
- rheological characterization of the pulps by dynamical mecanical analysisat constant strain rate;
- rheological characterization of the gelatinized starches by dynamical mechanical analysis (frequency sweep)
- rheological characterization by viscoamylographic profiles (RVA) in the rheometer starch cell;
- morphological and thermal characterization (lazer sizer and DSC)
-digestibility by enzymatic hydrolysis
- starch content by enzymatic hydrolysis

Keywords : Plant, Transformation, Starch, Ignam

Year : 2010
Project number : 1003-001
Type of funding : AWARD
Project type : PC
Research units in the network :
Start date : 2010-01-15
End date : 2011-11-30
Flagship project : no

Project leader : Olivier Gibert
Project leader's institution : CIRAD
Project leader's RU : QUALISUD

Budget allocated : 18840.64 €
Total budget allocated (including co-financing) : 18840.64 €
Funding : RTRA

PERSPECTIVES

-scientific valorization (3 papers under redaction + the data produced by molecular starch analysis done at INRA under discussion)
- discussions for further collaboration under progress