Project Summary

Title	Investigating contamination risks associated with wrapping indigenous foods in plastic bags during thermal processing
PI	Dr. Banadda Noble Makerere University Department of Agricultural and Biosystems Engineering Tel: +256774 04 66 89 Email: banadda@agric.mak.ac.ug
Co-researchers	Mrs. Kigozi Julia Makerere University Department of Agricultural and Biosystems Engineering Tel: +256774 65 58 64 Email: jkigozi@agric.mak.ac.ug Dr. Ssempala Cornelius Makerere University School of Education Tel: +256772 43 9001 Email: cssempala@educ.mak.ac.ug
Purpose	This research targets to assess and model PBC during cooking so as to contribute understanding contaminant diffusion and dispersion which is crucial for food quality and safety.
Project Summary	Wrapping food in banana leaves for the purposes of keeping it hot/warm has been practiced for centuries across communities in Uganda. However, the use of plastic bags especially polyethylene bags as opposed to banana leaves is on the steady increase especially in urban and peri-urban areas. Increase in the use of polyethylene bags in this role is due to their high thermo-sealability and barrier properties to water. Commercial food vendors are sure to serve a hot meal without necessarily spending a lot of resources on energy. Identifying hazards and risks associated with wrapping and packaging local food stuffs in colored low density polyethylene bags during and/or after cooking is a little-studied topic in Uganda whereas experiences from elsewhere point to the fact that such a practice is potentially devastating. In this study, mushed matooke will be used as case study foods. The resulting lead migration profiles and color changes shall one hand be documented and analyzed for any risks and on the other hand, modeled to understanding migration and spread of dynamics of contaminants in these foods. Therefore, the global objective of this study is to quantify the amount of lead contamination during thermal treatment of matooke wrapped in plastic bags. To achieve this goal, the color degradation of foods is studied basing on first order

	color degradation kinetics and the resulting values are used to estimate the temperature and cook value at which lead contamination would be at maximum.
Country and Specific Location(s)	Kampala, Mukono and Wakiso Districts
Participating Institutions	Makerere University
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End date	August, 2013
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