

PROJECT SUMMARY

Title of Project: Adding Value to Mauritian refined Cane Sugar	
Local Company: Omnicane Ltd	
Main Collaborating Institution: Mauritius Sugarcane Industry Research Institute (MSIRI) - Mauritius Cane Industry Authority (MCIA)	
Project Leader: Dr Jean Claude Autrey	
Research Collaborator(s)	
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Technical Abstract	
<p>In 2013 diabetes and pre-diabetes in Mauritius had a prevalence of 50% in the population aged 23 to 74*. The development of a low glycemic index (GI) sugar would help control diabetes not only in Mauritius but worldwide; it also adds value to the refined sugar. The objective is to co-crystallize a food grade, low GI material into the refined sugar crystal, thus lowering its GI. Polyols are well known food grade materials used commercially in nutrition and medicine; many have very low GI's, a sweet taste and can be prepared from cane sugar. Mauritian refined sugar could eventually be utilised as feedstock to prepare a polyol having the required properties to produce the low GI cane sugar. Besides polyols, physiological active compounds with antioxidant properties and low GI index characterised from a range of local sugars produced would also be utilised to produce a low GI sugar. Low GI sugars are available commercially in Australia and Japan; the low GI materials, which are not polyols, are either sprayed on the sugar crystals or mixed with the sugar. The co-crystallisation process proposed here is different as it incorporates and binds the polyol inside the sucrose crystal. Co-crystallisation does not require additional equipment, as it would be done in existing refinery crystallisers; production would then be carried out as usual. The availability of a formulation for co-crystallisation of refined sugar with a polyol to produce a low GI sugar in Mauritius, will be an innovation for the country. This will have a high impact on the Mauritian population with diabetes as well as worldwide.</p>	
Key Words: sugar; low GI; polyol; co-crystallisation; diabetes	