COMPOSITION AND HYDROXYMETHYLFURFURAL ANALYSIS OF BEES' HONEY, COCONUT AND KITHUL TREACLE

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Bees' honey, coconut and kithul treacle are highly demanded products in the market due to their natural origin, unique sweet taste and aroma. Chemical, physical and sensory parameters in each product vary due to various factors like area of origin, environmental factors, method of extraction, method of processing and storage. Aging, storage condition of the product and the heat treatments applied during the process produce Hydroxylmethylfurfural (HMF) as a by-product which is considered as a toxic component for human being. Therefore this study was conducted to determine the composition and HMF content of bees' honey, coconut and kithul treacle and to find out the associated cofactors on development of HMF. Methods mentioned in SLS 464 : 1979, SLS 772 : 1987 and Harmonized methods of the international honey commission 2009 were followed for the chemical and physical analysis. High performance liquid chromatography (Shimadzu LC 20 AT, Osaka, Japan) equipped with C18 reverse phase column and UV – visible detector at 285 nm wave length was used to determine the content of HMF. In sugar analysis by HPLC, carbohydrate column was used with refractive index detector. HMF was detected only in 60 % of bee honey samples in the range of 26 – 124 mg/kg. As a tropical country, Sri Lanka has the possibility to produce high HMF content in bees' honey. However, this is not applicable to kithul and coconut treacle.