E2-11 : DEBITTERING OF PALMYRAH FRUIT & PULP

*E R Jansz, J K Nikawala, K Theivendirajah**
Ceylon Institute of Scientific & Industrial Research, Colombo,
**Palmyrah Development Board, Colombo.*

Palmyrah (*Borassus flabellifer.* L.) is a common palm of the dry zone especially the North-eastern Province. Although it has traditional uses, the utilization of palmyrah fruit pulp is limited due to the presence of a bitter principle(s). The bitterness cannot be diluted out or masked and therefore must be removed. Removal using adsorbants, ion-exchange resins and leaching was not successful and therefore bioconversion was attempted.

The enzyme linamarase (ex. rubber seed) did not debitter significantly, glucosidase (ex. almonds) was partially successful but the enzyme system, naringinase (ex. *Penicillium decumbens*) achieved full debittering.

Concentrated (80% ethanolic extraction) bitter extracts on reaction with naringinase and tlc (butanol : ethanol : NH_3, 7:2:5) resulted in the disappearance of the substrate (saponin) and appearance of three products. Identification of the sugars released indicated that the bitter compound was a triglycoside of sapogenin, probably a mixture of two triglycosides i.e X-Rham.Glu.Glu. and X-Glu.Glu.Glu. (where X = sapogenin)in the ratio of approximately 1:9.