

## **B-72: Dehydration of soymilk**

D B T Wijeratne

*(Dept of Food Science, Univ of Illinois, USA)*

Generally, soymilk cannot be dehydrated without losing its solubility properties. Soymilk substitutes produced by micro-milling technique are also not very successful due to poor sensory characteristics. However, the presence of commercial dried soymilk products indicate the need for such products. The ability to replace cows milk in beverages, cooking and confectionery are among the potential uses of dried soy milk.

In this work, initially 5 commercial products were analysed for chemical, physical and sensory properties. The protein content of the products varied from 18 - 45%, total fat 24 - 36% & carbohydrate 12-36% indicating the use of excessive carbohydrate and lipid additives in some products. The protein solubility index (PDI) of the products varied widely from 20 - 70% and comparative studies showed that PDI gave an indication of emulsion stability.

Attempts were made to produce high quality dried soymilk powder with high protein content and good emulsion stability. Soymilk was produced by direct blanching process and subjected to spray drying to obtain high quality soymilk powder. This product contained 48% protein, 22% fat and 12% soluble carbohydrate. The PDI of the powder was 80% and the emulsion stability was very high. For different end uses, dry blending of carbohydrate is recommended as it improves the flavour as well as dispersibility of the product.