

### Zinc-enriched yeast extract production

In many beverages, mineral-enriched yeasts cannot be used as they become turbid or deposits are formed. The only way to obtain a soluble form of yeast is to produce yeast extracts. Yeast extracts are concentrates of soluble material obtained from yeast, following autolysis in controlled conditions. The nutritive value of yeast extract is due to its high content of soluble nitrogen as well as B-vitamins, phosphorus and trace elements including zinc hence it could be a useful and valuable means of adding zinc to foods and beverages meant for human consumption.

A study was done at Food Research and Development Center, Agriculture and Agri-Food Canada to determine the influence of enzymes on the production of zinc-enriched yeast extracts from dried mineral enriched Baker's yeast and to evaluate some of their characteristics.

Dried zinc-containing yeast (5g zinc/100g yeast) was rehydrated at 20% solids and subjected to autolysis at 50°C for 24h. Either of the following enzymes, glucoamylase, mannanase,  $\beta$ -1, 3 glucanase, fungal acid protease, validase FP or papain was added to promote lysis. In the absence of added enzymes, autolysis yield with fresh Baker's yeast was 46%, while that with the rehydrated zinc-enriched yeast was 21%. The fraction of the zinc that was recovered in the yeast extract ranged from 64 to 81%, of the total amount originally present in the yeast, depending on the enzymes used ( $\beta$ -1, 3 glucanase and validase F/P gave best results). Thus by using enzymes, yeast extract having 15g of zinc/100g of yeast extract could be obtained from rehydrated zinc-containing yeast. These zinc-containing yeast extracts could be added to human foods and beverages chiefly juices (Gaudreau *et al*, *J Food Sci Technol*, 2001, **38**, 348-351).

### Cadaba as a saccharifying agent

In Nigeria, 'Kunun zaki' is commonly consumed as a non-alcoholic beverage. Both in the urban and rural areas it is marketed in appropriate packaging materials such as empty bottles of carbonated soft drinks, plastic kegs and bottles and in small polyethylene sachets. It is a cereal based product prepared from millet, sorghum and maize with added spices etc. It has a characteristic acid flavour. Among ingredients added during production are pastes of malted rice, malted sorghum and sweet potato tubers and occasionally stem of *Cadaba farinosa* Forsk. which grows wild and also cultivated on a small scale.

A study of sensory evaluation of different levels of *Cadaba farinosa* in 'Kunun zaki' and determination of its position among other saccharifying agents has been done at Federal Polytechnic, Bauchi-Nigeria. The results revealed that the concentration of the crude extract of the stem at 0.25% (v/v) level produced a more acceptable product with the highest mean scores in almost all the parameters studied. At a higher concentration (0.30%) the extract imparted a pungent flavour with no pronounced effect on colour and total soluble solids. The presence of crude extract of stem in 'Kunun zaki' when compared with other saccharifying agents like malted rice, sweet potatoes, soybean seed and malted sorghum was found to have no significant difference ( $p > 0.05$ ) in colour and flavour. Thus the plant can be used as a substitute in the production of 'Kunun zaki' in place of other liquefying agents as it is cheaper and increases shelf-life of the product (Guffa & Jideani, *J Food Sci Technol*, 2001, **38**, 405-406).

### Add microlys modified Potato Starch in Yoghurt and prevent syneresis

A free aqueous phase or syneresis form of yoghurt is generally not preferred due to unappetizing look and reduced shelf-life. Stabilisers, such as gelatine, pectin, other hydrocolloids or mixes of such are often added to yoghurt in order to prevent syneresis but starch has been found to be more cost effective. Not only does it provide a better texture and mouth-feel especially in low fat contents, but it also very effectively prevents whey separation during storage. MICROLYS modified potato starch has been reported as a very attractive alternative for yoghurt since it binds more water at the same concentrations than do other starches. MICROLYS modified starch does not only provide high viscosity but also lends the final product a lustrous, smooth texture. To get a full-bodied texture using milk with 1.5% fat, a dosage of 1.5-2% MICROLYS is recommended [*Food Ingredients & Analysis Intern*, 2001, **23**(3), 46].