

## Effect of duration of roasting on sensory properties of cocoa liquor

Polyphenols are compounds, which are responsible for the astringency and flavours. Recently, cocoa bean polyphenols have attracted a lot of attention owing to their antioxidant activity and possible beneficial implications on human health, particularly in relation to some cancers, cardiovascular diseases and other pathologies. Scientists at Malaysia have studied the sensory properties of cocoa liquor as affected by polyphenol concentration and duration of roasting

During experiment sensory properties of cocoa liquor roasted at 120°C for 15, 25, 35 and 45 minutes and containing different polyphenol



concentrations (58, 116, 143 and 170 g/kg) were studied. Eight trained panellists carried out the sensory analysis using line scale with Ghanaian fermented cocoa liquor as a reference. The sensory attributes were cocoa flavour, astringency, bitterness, acidity/sourness, fruity/floral/bouquet, raw/green, smoky, mouldy/earthy and viscosity.

Results of the study showed that as polyphenol concentration in cocoa liquor increased, cocoa flavour and viscosity decreased and astringency and bitterness increased, however, other sensory properties were not influenced by polyphenol concentration. An increase in roasting duration of cocoa liquors containing 58–143g/kg polyphenol increased the flavour intensity; meanwhile that of contains 170g/kg polyphenol, it was in vice versa. These findings indicated that cocoa polyphenol would cause negative effect on flavour properties, apart from its well-known benefit as preservative and antioxidant [Misnawi *et al*, *Food Quality Prefer*, 2004, 15(5), 403-409].

## Natural dyeing of wool with Flame of Forest flowers

Flame of the Forest flowers are commonly known as *Tesu* flowers and botanically *Butea monosperma* (Lam.) Kuntze. The dye obtained from flowers is an ancient colour used during Holi festival. The powder is also used to prepare herbal *Gulal*. The dye is used for dyeing cotton and wool.

During a recent study carried for dyeing of wool with these flowers,

researchers extracted the dye in three media, viz. aqueous, alkaline and acidic. Before dyeing, wool yarns were scoured to remove all impurities. The scouring solution was prepared by adding 2 g of neutral soap in one litre of water. The scouring was done for 30 minutes with 1:50 material to liquor ratio. After scouring the yarns were washed many times to remove traces of soap and then

they were dried.

A definite amount of wool was added in all solutions. Beautiful yellow-orange colour is obtained from this dye. The sunlight fastness was found to be good to very good in all samples. Washing fastness was good to excellent [Kale *et al*, *Man-made Text India*, 2004, 47(6), 225-228].

## Natural dye from pseudostem of Banana for silk

Bananas, *Musa × paradisiaca* Linn. are cultivated in many countries.

India is also a largest producer of this plantain crop. The stem of banana plant is called pseudostem and is used mainly to obtain a fibre

employed in manufacturing paper. Banana fibre is extracted from dried petioles. The stem juice possesses medicinal properties especially for stones in kidney, gall bladder and prostate. Extraction of natural dye from pseudostem and its dyeing behaviour on silk fabric has been reported earlier in the literature. Ammayappan and other



have studied fastness properties of the natural dye extracted from pseudostem of banana on silk.

The silk fabric was dyed with and without four different mordants in three different mordanting methods in order to get various shades. The washing



fastness and light fastness of the final colour had also been assessed. The result revealed that pseudostem of banana contain 2-3% dye, which gives Vanilla cream colour without mordanting and with mordants (potassium dichromate, tannic acid, ferrous sulphate and aluminium sulphate) gave different colour/tones only in pale and light shade on silk fabric. The maximum exhaustion of this natural dye on silk fabric is at pH 4-5. After mordanting the light fastness improved in post-mordanting method with ferrous sulphate and tannic acid and washing fastness in pre-mordanting method with ferrous sulphate only (Ammayappan *et al*, *Man-made Text India*, 2004, 47(6), 218-220].

## Carrot kheer mix

The scientists at Defence Food Research Laboratory, Siddarthanagar, Mysore developed and formulated *kheer* mix based on dehydrated carrot, skim milk powder, sugar and ingredients and evaluated for shelf stability as well as sensory quality. The mix could be reconstituted quickly as a sweet dish and found to contain (%)

3.2 moisture, 8.06 fat, 17.70 protein, 57.19 total sugars, 10.17 reducing sugar, 2.5 ash, 0.2 acid insoluble ash, 1.11 crude fibre and 23.9 mg% carotenoids. It remained acceptable upto 9 months at 37° C temperature in paper-aluminium foil polypropylene laminate pouches [Manjunath *et al*, *J Food Sci Technol*, 2003, 40(3), 310-312].



## Carrot halwa from reconstituted dried carrot shreds

The scientists at College of Food Technology, Marathawada Agricultural University, Parbhani conducted studies on the chemical characteristics of carrots (*Daucus carota* Linn.) and studied dehydration effects on its food products. Greater leaching losses were observed in reducing sugars and total sugars during pre-treatments and had adverse effect on  $\beta$ -carotene content in all the samples. Reconstitution ratio of dried carrot shreds was higher in pre-treated samples than untreated. Shreds dried in open air had less reconstitution ratio. Sensory evaluation score of carrot *halwa* from reconstituted dried carrot shreds indicated its potential to use as base material for preparation of carrot *halwa* [Machewad *et al*, *J Food Sci Technol*, 2003, 40(4), 406-408].