

## Membrane Purification of Palm Sap (NEERA)

### EXECUTIVE SUMMARY

A process for enhancement of shelf life of palm sap by using polymeric membranes to remove microbes and impurities

### BACKGROUND

Palm sap is a nutritious drink, but it cannot be stored for long duration (once it is extracted from the palm tree) even under refrigeration.

### TECHNOLOGY DESCRIPTION

Polymeric membranes are used to purify/clarify palm sap (Neera). The resulting palm sap is visibly better, without turbidity, is free of bacteria and yeast (that cause fermentation). This can be achieved without loss of nutrients, and without any use of chemical additives/bio-preservatives. The purified palm sap has a shelf life of up to 6 months.

### MARKET POTENTIAL

- India has about 130 million palm trees; each tree could yield 150-200 litres of palm sap/year - resulting in 16,900- 26,000 million litres/year
- Health drink market in India is a fast growing market\*, and Neera could be marketed as a health drink with all natural ingredients

\*Beverage firms to flood market with health drinks Business Standard: February 28, 2008

### VALUE/ADVANTAGES

- Natural drink- from a widely available source
- It has been shown conclusively that Neera is a nutritive and a body coolant
- Nutritive: contains protein, natural sugars, iron, phosphorus, calcium, ascorbic acid, riboflavin and thiamine
- Cheap, affordable drink that could be made available throughout the year, and around the country (in its purified form)
- No refrigeration needed for packaged/purified Neera

### APPLICATIONS

- The purified palm sap (Neera) can be sold as a refreshing and natural drink
- Could be packaged and sold without getting spoiled (due to removal of micro-organisms)
- Has long shelf-life
- Cheap and natural drink

### TECHNOLOGY STATUS

- Demonstrated at the lab scale
- On the lookout for potential partners for spin-off and licensing