

## **BEST OF SUBJECT CATEGORY AWARD BIO-CHEMISTRY – DELHI NATIONAL FAIR**

### **Coconut Water As A Source For Making Rubber Sheets**

Rahul Ravind

Al-Azhar English Medium School, Thrissur

Rubber is the backbone of man. It is impossible to think about a day without cars (running on tyres) and we without slippers and so on. This experiment was serendipity because I was studying the effects of growth in plants by using coconut water as endosperms. But some coconut water spilled into the dish containing rubber milk and it got coagulated. This led me to this experiment.

I used fermented coconut water to the rubber milk and it became coagulated and I used it as a substitute for the formic acid which is used to coagulate the rubber milk to which is later drawn to make sheets. For one rubber sheet we need only 200ml or less coconut water (according to the strength of the fermented coconut water). Yeast can be added to ferment the coconut water.

If acid is used the rubber gets charred but this does not happen if coconut water is used. If the amount of acid increases the rubber gets charred and its quality loses away. But if the amount of coconut water increases this does not happen. We can make 5 to 6 sheets at a stretch by using the coagulated milk got by using coconut water. This can be done only if the coagulated milk is of good quality. In acid coagulated milk we can make only 2 sheets at a stretch. Thus the quality of rubber is ensured.

The wasted coconut water be used in this way. This coconut water is of great use to the poor rubber farmer who are helpless to buy costly acids.