

## An estimation of the level of alcohols in selected *Asava* and *Arishta* preparations

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*Arishta* and *Asava* have been used as medicines over 3000 years to treat several disorders and also are taken as appetizers and stimulants. Due to the medicinal value, sweetened taste and availability, people are prone to consume higher dosages of these preparations for longer periods. There is a belief that consumption of *Arishta* and *Asava* for a long period could be a cause for non alcoholic cirrhosis.

Randomly collected (island wide) commercially available 20 different brands each, of *Ashvagandharishta* and *Aravindasava* were tested for percentage of total alcohols using an electric ebulliometer. The percentage of ethanol in each mixture was determined by distillation of them at 78 °C. The pH of each sample was measured at the opening of the bottle, and 7 and 14 days after opening the bottle. The acid value of each sample was determined by titrimetry using sodium hydroxide. All determinations were carried out for three replicates and the mean and standard deviations were calculated.

Alcohol percentage (v/v) of the tested brands of *Ashvagandharishta* varied with a maximum of 13.13, a minimum of 7.27 and with a mean value is 9.95. These values were 13.13, 7.50 and 9.90 respectively for the *Aravindasava*. Maximum level of isolated ethanol was 8.23 and the minimum was 5.17 in *Ashvagandharishta* and these values were 8.60 and 5.67 for *Aravindasava*. Difference between the total alcohol and ethanol was the other alcohols, which are present in the drug. The pH values of all samples were in the acid range, between 3.6 and 4.1 and there was no significant difference in the pH, 14 days after opening the bottles. The acidity of the samples of *Aravindasava* and *Ashvagandharishta* were between 0.07 and 0.14 mol dm<sup>-3</sup>.

It can be seen that the alcohol content of tested preparations does not exceed the levels of some other alcoholic beverages but they are higher than the level of alcohols in beer, which is about 2 to 8 percent. According to the results there is a very low possibility of adding extra alcohols to *Ashvagandharishta* or *Aravindasava* during the manufacturing process, but they are already having a significant amount of self-generated alcohols.

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