

Preliminary analytical study on the fermentation process of pharmaceutically prepared two herbal wines

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Arishta and *Asava* are herbal wines very popular among Sri Lankans and Indians. The Indian Ayurvedic texts describe both the beneficent uses of alcoholic beverages (*Madya varga*) and the consequences of intoxication and the diseases due to alcoholism. There is a belief that alcohol is added to these drugs and it can cause Cirrhosis. Natural fermentation is the main process of preparation of *Asava* and *Arisht*, standardization, and quality control of the preparation of these drugs are not being properly done in Sri Lanka. Preparation of *Arishta* and *Asava* without paying an attention to the standards and qualities could lead to a negative impact on the Ayurveda pharmaceutical industry. This study was conducted with a view to upgrading the pharmaceutical preparation of *Arishta* and *Asava* by standardizing and quality controlling the process. Level of alcohol, acidity and pH of *Ashvagandharishta* and *Aravindasava* were determined during the fermentation period and in the post-fermented period using standard analytical methods. At the start of fermentation, alcohol percentage (v/v) of pharmaceutically prepared *Aravindasava* and *Ashvagandharishta* was zero. Alcohol was detected after 4 days of fermentation in *Aravindasava*. There after, the alcohol content of fermenting solutions gradually increased and reached to about 3.57 on the 9th day. After 30 days alcohol percentage (v/v) of pharmaceutically prepared *Aravindasava* was 6.6. Alcohol percentage in *Ashvagandharishta* too was gradually increased after the 4th day of fermenting and reached about 6.97 at the 9th day. After 30 days alcohol percentage of pharmaceutically prepared *Ashvagandharishta* was 11.73 (v/v). The pH of the water used for the preparation of *Asava* and *Arishta* was 7.56. After adding sugar and bee honey the pH of the solution of *Aravindasava* was about 4.57. The pH gradually decreased and reached 3.46 after 9th day the pH of the prepared *Aravindasava* was about 3.52 and that of *Arishta* was 4.69. These pH values of the solution gradually decreased and reach to 3.47 after 9th day in the fermentation. During the fermentation period level of acetic acid of the samples was increased and reaches to about 0.10 mol dm⁻³ in both drugs, showing that, *Aravindasava* and *Ashvagandharishta* have weak acidic properties. These low pH and acidity could be due to uncontrolled oxidation of alcohols to acetic acid. Further studies on the fermentation process of *Asava* and *Arishta* would allow up grade the manufacturing process to develop quality and to maintain standards of these Ayurvedic preparations.

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