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Microbiological quality of *Aravindasava* used in Ayurveda

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Aravindasava is an Ayurvedic preparation used as a medicine, vigor tonic, appetizer and rejuvenation tonic. *Aravindasava* is prepared by subjecting herbal raw materials to cool water extraction followed by a natural fermentation. Since this fermentation is a heterogeneous process open for natural inocular and carried out in complex heterogeneous media under uncontrolled factory environments, the finished product may contain distinctive types of microorganisms other than the end by products of fermentation such as ethanol, methanol, other alcohols, acetaldehyde, ethyl acetate and metals which have been investigated and recorded previously. Enumeration and identification of the microorganisms are highly significant in order to improve the microbial quality of these non sterile products in view of consumer safety and to introduce it as herbal health care tonic to the global market.

Commercially available brands (n=20) of *Aravindasava* which are distributed island wide by respective manufacturers were randomly collected. Microbial quality and hygienic condition of the brands has been determined in terms of colony forming unit per mL (CFU/mL) and presence or absence of *Escherichia coli* and *Salmonella* in 1mL and 10mL volumes of the samples respectively. Dilution plate count method was used to enumerate the bacterial and yeast population in each sample. Most probable number (MPN) method, triplicate tube method was used for the detection and enumeration of coliforms and *E. coli*. The selective enrichment culture technique and Selanite and Tetrathionate test were used for the detection of *Salmonella*. Morphological and biochemical characterization test was applied for the identification of bacteria present in selected brands. The results revealed that the bacterial population was less than 1 CFU/ml in all brands of *Aravindasava*. Yeast population was less than 1CFU/ml in all tested brands. All brands were free of *E. coli* and *Salmonella*. Pure cultures of the isolated bacteria were prepared in nutrient agar medium and 40 morphologically distinctive colonies were identified. All colonies were Gram positive spore forming bacilli. Identification of these bacteria is in progress. Hygienic condition of the tested brands is at satisfactory level and recorded results of bacterial and yeast population could be used as parameters for standardization of the product.

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