

## ABSTRACT

Aloe vera is considered as the medicinal plant due to which many researchers are working on formulating various health beneficial food products. Due to various research studies aloe vera is accepted to have numerous therapeutical and nutritional effects in humans. Nowadays scientists are working in obtaining medicines to cure diabetes as well as cancer using this plant. In India, people use this plant mainly in cosmetics and scientists are still working to create consumer awareness by introducing aloe vera herbal products

The aim of this study was to obtain a ready to serve drink made up of aloe vera, herbs (tulsi, mint) and some seasonal fruit (orange, kiwi). Aloe vera contains numerous vitamins and minerals, enzymes, amino acids, natural sugars and agents which may be anti-inflammatory and anti-microbial. The formulated juice does not contain any artificial preservatives since it contains citrus fruits like orange, kiwi which are believed to have high amount of ascorbic acid for which they act as natural preservatives. Various proximate chemical analysis was performed to know the nutritional contents of the raw aloe vera juice and the formulated juice. A proliferative test using MTT was done to analyze the cytotoxicity of aloe vera gel. Also microbial assays were performed to check for the functionality of aloe vera against the pathogenic bacteria and fungus. Using software, design expert the best optimized combination was found and used for formulation of juice. The antioxidative properties are found to be higher than the raw aloe vera gel which may be due to the effect of the citrus fruits. After the formulation of the product proximate analysis were done and protein content was found as  $0.141 \pm 0.02$ , fat  $0.01 \pm 0.044$ , ash  $0.099 \pm 0.007$ , crude fibre  $0.11 \pm 1.00$ , carbohydrates  $33.25 \pm 0.02$ . Antimicrobial activity of formulated aloe vera drink was analyzed by zone of inhibition against pathogens. It was found that aloe vera juice showed maximum activity against *Salmonella Typhimurium* and *B subtilis* with a zone of 10 mm and against fungus *Candida albicans* with a zone of inhibition 14 mm. Such result showed that this juice can be effective against the above mentioned pathogens. Such kind of juice can be served as a ready to serve drink with health beneficial effect.