

ABSTRACT

Vinegar is a preservative most commonly used in food preparations such as in pickling and salad dressings. Although acetic acid is the key ingredient in vinegar, acetic acid cannot be called as vinegar. Naturally fermented vinegar contains lot of constituents other than acetic acid which imparts its distinct flavor. Therefore, the natural fermented vinegar has a high demand in the market.

Coconut vinegar produced by the company C.D.De Fonseka and Sons (Pvt) Ltd has a market share of over 75% in the Sri Lankan vinegar market. But from the very inception they have been facing a problem of sedimentation in vinegar. The sediments form and appear at the bottom of the bottle when kept in a place after bottling. Therefore, this study has been focused to determine a cost effective method for removing sediments formed in coconut vinegar. To achieve this main objective, a set of several specific objectives were planned. These specific objectives include identification of biological and chemical components in the sediments, identification of the causes of sedimentation in vinegar and identification of the effect of sediment on quality parameters.

Analysis of a sample of sediment was carried out by the Industrial Technology Institute to identify the microbiological and chemical components of it. Other experiments were designed to identify the effect of yeast level, filtration, pasteurization temperature and filling temperature on sedimentation and to identify a suitable clarification agent which would result good clarity in vinegar.

Results showed the presence of bacteria, yeast and iron and copper ions in the sediment. It is clear that there is an effect of yeast level and pasteurization temperature on sedimentation. Acidity of vinegar is increased during storage due to the presence of acetic acid bacteria.

Use of yeast at a level of 0.0875% and pasteurization at 70°C for 20 minutes help in reducing the degree of sedimentation. Casein at a level of 0.5% can be used to clarify vinegar, with a less settling period, and thereby increase the quality of coconut vinegar by removing sediments.