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Vinegar is made from sugary/starchy material by an alcoholic fermentation followed by an acetous one. Vinegars can be synthetic, processed by catalytic oxidation of acetaldehyde or natural, from natural substances. Our research on Coconut toddy vinegar (natural vinegar) focused on the sediment observed in vinegar and included primarily the isolation of micro-organisms concerned with sediment formation. Changes with time of turbidity, pH and acid content were also measured.

In this study 4 replicates of vinegar and 7 different media were used. Isolates were subjected to Gram staining and spore staining. Formazin turbidimeter was used to measure turbidity and TOA digital pH meter (HM - 20S) for pH measurement. Acid content was measured by titrating against sodium hydroxide.

Microbial growth was observed in Nutrient Agar and Eosin Methylene Blue Agar but not in Potato Dextrose Agar, Acetic acid Agar and Vinegar Agar. Bacterial colonies isolated on Nutrient Agar numbered 4. 3 isolates were Gram positive and 1 Gram negative but none formed spores. Isolates on Eosin Methylene Blue Agar were Gram negative, non-spore forming and fermented both Lactose/Glucose broth. With time a slight increase in turbidity was seen. pH and acid content fluctuated between 3.0 - 3.5 and 4.5 - 5.0g respectively with no gradual increase/decrease.

Difficulty in microbial cultivation suggests the sediment micro-organisms as initial contaminants; the slight increase in turbidity may be due to sampling error. No inverse relationship existed between pH and acid content. Fermentation of Glucose broth suggests presence of thermotolerant coliforms. Use of raw vinegar in foods is therefore not suitable.

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