

ABSTRACT

Neni Nur Khanifah. 24020120140106. **Physicochemical Characteristics of Curcuma Kombucha at Different Concentration Levels of SCOBY Starter.** Supervised by Endang Kusdiyantini and Siti Nur Jannah.

Curcuma is a spice with high bioactive compound. Curcuma rhizome has antibacterial, antioxidant, anticancer, and antitumor properties. The use of curcuma as raw material for kombucha can optimize its utilization. Curcuma kombucha is made with SCOBY (Symbiotic Culture of Bacteria and Yeast) starter as an initial culture in fermentation process. The research purpose was to analyze the pH value, total titrated acid, ethanol content, antioxidant activity, organoleptic quality, and total microbes of curcuma kombucha drinks with various SCOBY concentration levels. Curcuma kombucha with starter at concentrations of 0%, 5%, 10%, and 15% were analyzed for pH value, total titrated acid content, ethanol content, antioxidant activity, organoleptic quality, and total microbes. The pH value tested using a pH meter, total acid content tested using titration method, ethanol content tested using pycnometer method, antioxidant activity tested using DPPH method, organoleptic quality tested based on level of preference, and total microbes tested using TPC method. Different concentrations of SCOBY significantly impact the pH value and total titrated acid content of curcuma kombucha. Ethanol content in all treatments is more than 0,5%. The best antioxidant activity was found in the 15% SCOBY treatment, which had the lowest IC50 value. The highest preference from panelists for the color, odor, and taste of curcuma kombucha was found in the 5% SCOBY treatment. Total microbes value in curcuma kombucha increases with higher SCOBY concentrations.

Keywords: curcuma, SCOBY, physicochemical characteristics