

**PENGARUH KONSENTRASI STARTER SCOBY (*SYMBIOTIC CULTURE OF BACTERIA AND YEAST*)  
TERHADAP TOTAL MIKROBA, TOTAL KHAMIR DAN ORGANOLEPTIK  
KOMBUCHA SARI BUAH APEL**

*[The Effect of SCOBY (Symbiotic Culture of Bacteria and Yeast) Starter's Concentration on Total Plate Count, Total Yeast and Organoleptic of Apple Juice Kombucha]*

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**ABSTRACT**

*Apple juice kombucha was a fermented drink made from apple juice using a SCOBY (Symbiotic Culture of Bacteria and Yeast) starter that fermented time of 8 days. This research was aimed to determine the effect of SCOBY starter's concentration on Total Plate Count (TPC), total yeast, total acid, antioxidant activity and organoleptic (color, aroma and taste) properties of apple juice kombucha. This study used a Completely Randomized Design (CRD) with one factor or a single factor, namely the difference concentration of the SCOBY starter such as of 2%, 4%, 6%, 8%, 10% and 12% that repeated 3 times in order to obtain 18 experimental units. The tested parameters were TPC, total yeast, total acid, and antioxidants activity as well as organoleptic quality which included color, taste and aroma. From the observational data, the diversity was analyzed with a significance level of 5% using the Co-Stat application. If there was a significant difference, further testing was carried out with the Honestly Significant Difference (HSD) test. The results showed that the concentration level of SCOBY starter had a significant effect on TPC, total yeast, total acid, antioxidant activity and organoleptic quality including taste (hedonic and scoring) and color (scoring). The treatment that acceptable (somewhat favored) by the panelists from the taste organoleptic was the concentration of SCOBY starter 4% with Total Plate Count 6.32 log CFU/mL, total yeast 8.25 log CFU/mL, total acid 0.65%, antioxidant activity 36.75% with organoleptic color "slightly brown", aroma "does not smell apple" and taste "slightly sweet".*

**Keywords:** Apple juice, kombucha, SCOBY.

**ABSTRAK**

Kombucha sari buah apel merupakan minuman fermentasi dari sari buah apel menggunakan starter SCOBY (*Symbiotic Culture of Bacteria and Yeast*) dengan waktu fermentasi selama 8 hari. Penelitian ini bertujuan untuk mengetahui pengaruh konsentrasi starter SCOBY (*Symbiotic Culture of Bacteria and Yeast*) terhadap total mikroba, total khamir, total asam, aktivitas antioksidan dan organoleptik (warna, aroma dan rasa) kombucha sari buah apel. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan satu faktor atau faktor tunggal, yaitu perbedaan konsentrasi starter SCOBY dengan perakuan penambahan starter sebesar 2%, 4%, 6%, 8%, 10% dan 12% serta ulangan sebanyak 3 kali sehingga diperoleh 18 unit percobaan. Adapun parameter yang diuji adalah *Total Plate Count* (TPC), total khamir, total asam, dan aktivitas antioksidan serta mutu organoleptik yang meliputi warna, aroma dan rasa. Dari data hasil pengamatan dianalisis keragaman dengan taraf nyata 5% dengan menggunakan aplikasi Co-Stat. Apabila terdapat beda nyata, dilakukan uji lanjut dengan uji Beda Nyata Jujur (BNJ). Hasil penelitian menunjukkan tingkat konsentrasi starter SCOBY memberikan pengaruh nyata terhadap *Total Plate Count* (TPC), total khamir, total asam, aktivitas antioksidan dan mutu organoleptik meliputi rasa (hedonik dan scoring) dan warna (scoring). Perlakuan yang dapat diterima (agak disukai) oleh panelis dari organoleptik rasa adalah konsentrasi starter SCOBY 4% dengan *Total Plate Count* 6,32 log CFU/mL, total khamir 8,25 log CFU/mL, total asam 0,65%, aktivitas antioksidan 36,75% dengan organoleptik warna "agak coklat", aroma "tidak beraroma apel" dan rasa "agak manis".

**Kata kunci:** Kombucha, sari buah apel, SCOBY.