

## **ABSTRACT**

### **STUDY OF PRODUCING SYNPBiotic DRINKS BASED ON LOCAL SEEDS AND OYSTER MUSHROOM WITH THE ADDITION OF *Lactobacillus casei***

**By**

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This study was aimed to evaluate the effect of *Lactobacillus casei* with various concentration on synbiotic drinks based on local seeds and oyster mushroom. Another aim from this study was to find out the best treatment for the characteristics according to SNI 7552:2018. In this study, using the formulation of *L. casei* with 6 levels of concentration (0%, 2%, 3%, 4%, 5%, 6%). This study was arranged in non-factorial manner in Completely Randomized Block Design (RAKL) with 4 replications. The data obtained were tested for homogeneity of variance with the Bartletts test and additivity data was tested with the Tukey test. The data were then analyzed for variance and further processed using Least Significant Difference test (LSD) at 5% level. Synbiotic drink with 4% of *L. casei* found to be the best treatment which had a total LAB of 9.83 log CFU/mL, 0.76% lactic acid, 3.52 pH with a color score of 3.53 (like), a aroma score of 3.32 (neutral), a taste score of 2.34 (neutral) and an overall acceptance score of 2.83 (neutral).

Keywords: Lactic acid bacteria, *L. casei*, prebiotics, probiotics, synbiotics

## **ABSTRAK**

### **STUDI PEMBUATAN MINUMAN SINBIOTIK BERBASIS BIJI-BIJIAN LOKAL DAN JAMUR TIRAM DENGAN PENAMBAHAN *Lactobacillus casei***

**Oleh**

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Penelitian ini bertujuan untuk melihat pengaruh konsentrasi *Lactobacillus casei* terhadap minuman sinbiotik biji-bijian dan jamur tiram yang dihasilkan serta mendapatkan perlakuan terbaik terhadap karakteristik minuman fermentasi laktat sesuai SNI 7552:2018. Pada penelitian ini digunakan formulasi penambahan starter *L.casei* dengan 6 taraf konsentrasi (0%, 2%, 3%, 4%, 5%, 6%). Penelitian ini disusun secara non faktorial dalam Rancangan Acak Kelompok Lengkap (RAKL) dengan 4 kali ulangan. Data yang diperoleh diuji kesamaan ragamnya dengan uji Bartletts dan kenambahan data diuji dengan uji Tukey. Data kemudian dilakukan analisis sidik ragam dan diolah lebih lanjut menggunakan uji beda nyata terkecil (BNT) pada taraf 5%. Minuman sinbiotik dengan konsentrasi *L.casei* 4% merupakan perlakuan terbaik yang memiliki total BAL 9,83 log CFU/mL, asam laktat 0,76%, pH 3,52 dengan skor warna 3,53 (suka), skor aroma 3,32 (agak suka), skor rasa 2,34 (agak suka) dan skor penerimaan keseluruhan 2,83 (agak suka).

Kata Kunci: Bakteri asam laktat, *L. casei*, prebiotik, probiotik, sinbiotik