Pengaruh penambahan starter mikroba (acetobacter aceti FNCC 0016, lactobacillus plantarum FNCC 0625 dan saccharomyces cerevisiae FNCC 3049) serta pemerasan PULP terhadap fermentasi dan mutu biji kakao (theobroma cacao L) = Effect of starter culture addition (acetobacter aceti FNCC 0016 lactobacillus plantarum FNCC 0625 saccharomyces cerevisiae FNCC 3049) and depulping on the fermentation and quality of cocoa beans theobroma cacao l / Zahra Haifa

Zahra Haifa, author

Abstrak

[Telah dilakukan penelitian yang bertujuan untuk mengetahui pengaruh penambahan starter mikroba (Acetobacter aceti, Lactobacillus plantarum dan Saccharomyces cerevisiae) serta pemerasan pulp terhadap fermentasi dan mutu biji kakao. Penelitian menggunakan metode Rancangan Acak Lengkap (RAL) pola faktorial 3x5 dengan dua kali ulangan. Hasil penelitian menunjukkan bahwa penambahan starter meningkatkan konsentrasi etanol pada saat fermentasi dan meningkatkan kadar asam asetat dan asam sitrat, tetapi menurunkan konsentrasi asam oksalat pada biji kakao. Penambahan starter disertai pemerasan pulp menghasilkan biji kakao dengan kadar asam asetat sebesar 0,47%, sedangkan biji kakao tanpa pemerasan menghasilkan kadar asam asetat 0,49%. Penambahan starter disertai pemerasan pulp menghasilkan mutu biji kakao terbaik dengan karakteristik sebagai berikut: skor nilai uji belah tertinggi (379 dari 400), mutu fisik (Golongan mutu A) serta memenuhi persyaratan mutu SNI 2008 No. 2323 tentang biji kakao dengan rasio jumlah per berat biji sebanyak 88 biji/100g; nilai pH 4,93; kadar asam asetat 0,47%, kadar lemak 34,90%, kadar air 4,47%, kadar serat kasar 3,66% dan kadar abu 4,82% dengan waktu fermentasi selama 5 hari.;The aimed of this study was to investigate the effect of starter culture addition (Acetobacter aceti, Lactobacillus plantarum, and Saccharomyces cerevisiae) with depulping on the fermentation and quality of cocoa beans. The experimental design of this study was conducted using a 3×5 factorial Completely Randomized Design (CRD) with duplicate replication. The result revealed that starter addition increased ethanol concentration on the fermentation process, increased acetate acid, and citric acid concentration meanwhile oxalic acid was decreased on cocoa beans during 5 days of fermentation. Depulping caused a slight decrease in acetic acid concentration at the end of fermentation with values of 0,47%, meanwhile the sample of cocoa beans without depulping treatment had acetic acid concentration of 0,49%. Starter culture addition and depulping treatment resulted the best characteristic of cocoa beans which visualized by the largest amounts of cut test score (379 of 400), physical quality (Grade A) and completed SNI No. 2323-2008 requirements with total beans/100 g ratio of 88 beans/100g; pH values of 4,93; acetic acid concentrations of 0,47%, content of fat 15,12%, moisture 4,47%, crude fiber 3,66% and total ash 4,82% after 5 days fermentation., The aimed of this study was to investigate the effect of starter culture addition (Acetobacter aceti, Lactobacillus plantarum, and Saccharomyces cerevisiae) with depulping on the fermentation and quality of cocoa beans. The experimental design of this study was conducted using a 3×5 factorial Completely Randomized Design (CRD) with duplicate replication. The result revealed that starter addition increased ethanol concentration on the fermentation process, increased acetate acid, and citric acid concentration meanwhile oxalic acid was

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