



COMPARATIVE STUDIES OF WINE PRODUCED FROM COCOA SWEATINGS AND COCOA POWDER

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ABSTRACT

Objective: Wine produced from Cocoa powder (CPW) was compared with wine from Cocoa sweating (CSW) to determine similarities and differences in terms of chemical properties and physical attributes. The two wines were produced in the winery room of the Cocoa Research Institute of Nigeria (CRIN).

Methodology and results: The process-involved collection of cocoa sweating from the pod-breaking unit of the fermentary. The juices collected were used for wine production. CPW was processed using cocoa powder. The CSWine processing involved collection of cocoa sweating juice from the pod-breaking unit of the fermentary, CPW by using cocoa powder. Further processing of CSW and CPW involved dilution of the juice and powder with water-glucose syrup, fermented using *S. cerevisiae*, later decanted and allowed to undergo the aging process then bottled, pasteurized and cooled. Chemical analysis and organoleptic characterization of the wines was carried out alongside commercially available wines. The

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organoleptic appraisal used a 9-point hedonic scale ranging from 9- like extremely to 1-dislike extremely and was carried out using 100 untrained panelists who are accustomed to wine drinking. The results showed that CSW has a pH of 3.65 as compared to a pH of 3.10 for CPW. The percentage alcohol content of CSW is 11.01 while that of CPW is 8.00. The physical attribute of the two types of wine varies greatly with CPW having light brown color, sweet and sour taste, with brilliance, aromatic flavor and a clear sparkle, while CSW has a colorless appearance, sour taste and is slightly turbid. Sensory evaluation results showed that CPW was more acceptable in color, brilliance and taste than the CSW.

Conclusion and application of findings: This study revealed that two different types of wine could be produced from Cocoa. The CPW that has low alcohol content is sweet and will be highly relished by sweet taste lovers and could serve as table wine, while CSW with high alcoholic content would be more preferable for people that cherish high alcohol content in wine. These findings will increase value addition opportunities available to cocoa farmers to further augment their incomes.

Key words: Cocoa, powder, sweating, wine, chemical analysis, organoleptic appraisal